Manitoba
Conservation

Annual Report
2002 – 2003

Manitoba

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Annual Report
2002 – 2003

Text: Includes 10% Post-Consumer Waste

Manitoba

MINISTER OF CONSERVATION

Legislative Building
Winnipeg, Manitoba, CANADA
R3C 0V8

The Honourable Peter M. Liba, C.M.
Lieutenant Governor of Manitoba
Government House
Winnipeg MB R3C 0V8

Your Honour:

I am pleased to present you with the 4th Annual Report of the Manitoba Department of Conservation for the year ending March 31st, 2003.

This report details the Department's many accomplishments and activities as we fulfill our mandate of protecting the environment while sustaining and conserving the abundant resources we enjoy as Manitobans.

The Department is working hard to connect with and reach out to Manitobans in the delivery of its programs and services. By working with and responding to the needs of the public we can ensure that we meet the challenges and opportunities of sustainability together.

In this year's Annual Report, the Department has provided detailed information regarding the implementation of the requirements of *The Sustainable Development Act* both within the Department itself and across government. By providing this information to the public we are assuring their participation in this important exercise to make government more sustainable in its activities.

The staff of Manitoba Conservation are dedicated to providing effective service to Manitobans and I hope the detailed information contained in this Annual Report sheds some light on the many important activities that take place on a yearly basis around the province in our quest for sustainability.

Respectfully Submitted,

Steve

Steve Ashton
Minister of Conservation

Manitoba

Deputy Minister of
Conservation

Legislative Building
Winnipeg, Manitoba CANADA
R3C 0V8

The Honourable Steve Ashton
Minister of Conservation
Legislative Building
Winnipeg MB R3C 0V8

Dear Minister:

I am pleased to provide the Annual Report of Manitoba Conservation for the fiscal year 2002 – 03.

In particular, I wish to highlight the following significant activities of the Department during the past fiscal year:

- The *Water and Wastewater Facility Operators Regulation* was passed into law and is now being implemented.
- The Forestry Branch worked with Manitoba Industry, Trade and Mines to represent Manitoba in U.S. Department of Commerce's countervail investigation of softwood lumber imports from Canada.
- The Manitoba Land Initiative (MLI) data warehouse is now fully operational and available via the Intranet. This repository contains all government geospatial GIS data and related databases and meta-data, with interactive mapping tools.
- The Caribou River Wilderness Park and Trappist Monastery Heritage Park were designated with public and community support. Manitoba's park system now includes 77 parks.
- A review and public consultation of the *Livestock Manure and Mortalities Management Regulation* was completed. A number of significant amendments to the regulation are being proposed, including dropping the regulatory threshold from 400 to 300 animal units, mandatory monitoring of the source of drinking water for livestock in large operations and certification of commercial manure applicators.
- The *Dangerous Goods Handling and Transportation Regulation* was enacted, replacing its predecessor, in effect since 1985. These changes reflect Manitoba's commitment to a harmonized regulatory approach to dangerous goods and hazardous waste management with the other provinces and the Federal government.
- The Emergency Response Team responded to 507 calls during the year and 369 environmental accidents were reported.

- *The Polar Bear Protection Act* and *The Security Management Act* received Royal Assent and were proclaimed into force. *The Drinking Water Safety Act* and *The Resource Tourism Operators Act* received Royal Assent.
- Implementation of *The Sustainable Development Act* continued, including the development of draft annual report guidelines used to guide reporting of progress made at integrating sustainable development in the operations on government departments and a draft sustainable development procurement and financial management guidelines regulation which will govern municipalities, school divisions, regional health authorities, colleges and universities.
- Co-ordination of the East Side Lake Winnipeg Broad Area Planning Initiative continued; the East Side Lake Winnipeg Round Table was established.
- Two major projects for enhancing flood protection in Winnipeg were studied: expanded Red River Floodway and the Ste. Agathe Detention Structure.
- Provided on-going technical and scientific support on trans-boundary issues related to Devils Lake and the Garrison Project.
- Final draft of the *Manitoba Water Quality Standards, Objectives, and Guidelines* was released.
- In accordance with *Water: A Strategic Plan for Manitoba*, three Task Teams were struck to address the legislative framework, watershed management planning and financial underpinnings.
- Pilot projects were established with Whitemud Conservation District and Cooks Creek Conservation District to receive, review and make recommendations on drainage licensing complaints and licence applications.
- Completed $18.3 million further flood protection for homes/businesses, community dykes and related program elements under the *Canada-Manitoba Flood Proofing Agreement*.
- Ensured performance and public safety by maintaining and refurbishing important flood-protection works such as Red River Floodway, Portage Diversion Works, and Assiniboine River dykes.

Respectfully submitted,

Norman R. Brandson
Deputy Minister

Contents

List of Tables **2**
List of Figures **3**
Highlights **5**
  Points saillants 14
  Sustainable Development Integration 25
  Government-wide Implementation of Sustainable Development 36
Introduction **47**
Administration and Finance **49**
  Minister's Salary 49
  Executive Support 49
  Corporate Services 49
  Financial Services 51
  Human Resource Services 52
  Information Technology Services 53
Conservation Support Services **55**
  Computer Graphics 55
  Survey Services 57
  Distribution Centre 59
Regional Operations **61**
  Headquarters Operations 61
  Northwest Region 72
  Northeast Region 75
  Interlake Region 78
  Eastern Region 82
  Western Region 84
  Red River Region 89
  Fire Program 91
  Office of Drinking Water 94
Conservation Programs **95**
  Divisional Administration 95
  Water Management 96
  Parks and Natural Areas 113
  Air Quality 120
  Forestry 122
  Fisheries 130
  Wildlife and Ecosystem Protection 143
  Pollution Prevention 170
  Lands 180
Habitat Enhancement Fund **187**
Special Conservation and Endangered Species Fund **188**
Environmental Stewardship **189**
  Divisional Administration 189
  Sustainable Resource Management 190
  Environmental Assessment and Licensing 196
  Aboriginal Relations 201
Clean Environment Commission **203**
International Institute for Sustainable Development **204**
Infrastructure and Minor Capital Projects **205**
Amortization of Capital Assets **207**
Flood Proofing Programs **208**
Revenue and Expenditure Summaries **209**
Publications **219**
Legislation **222**

List of Tables

AF.1 Expenditure, Minister's Salary 49
AF.2 Expenditure, Executive Support 49
AF.3 Expenditure, Corporate Services 50
AF.4 Expenditure, Financial Services 52
AF.5 Employment Equity Representation 53
AF.6 Expenditure, Human Resource Services 53
AF.7 Expenditure, Information Technology Services 54
CS.1 Expenditure, Computer Graphics 56
CS.2 Expenditure, Survey Services 59
CS.3 Distribution Centre 60
RO.1 Livestock Regulation Enforcement 1994-95 to 2002-03 62
RO.2 Environmental Accidents 64
RO.3 Environmental Sector Enforcement 65
RO.4 Enforcement, by Act/Regulation 65
RO.5 Common Violations under ***The Provincial Parks Act*** 66
RO.6 Common Violations under ***The Wildlife Act*** 67
RO.7 Common Violations under ***Fisheries Act*** and ***Freshwater Fish Marketing Act*** (Canada) and ***The Fisheries Act*** (Manitoba) 67
RO.8 Comparison of Wildlife, Fisheries, Parks and Migratory Birds Prosecutions 1993-94 to 2002-03 68
RO.9 Record of Violations Concluded 68
RO.10 Hunter and Firearm Safety Program 1992-2002 69
RO.11 Firearm Accidents 1964-1998, 5-year Averages 69
RO.12 Firearm Accidents 1992-2002 69
RO.13 Hunter-Killed Livestock Compensation 1993-94 to 2002-03 70
RO.14 Problem Wildlife Occurrences 70
RO.15 T.I.P. Calls by Region 71
RO.16 T.I.P. Calls by Year, 1994-95 to 2002-03 71
RO.17 Expenditure, Headquarters Operations 71
RO.18 Expenditure, Northwest Region 74
RO.19 Expenditure, Northeast Region 77
RO.20 Commercial Fish Harvest, Interlake Region 79
RO.21 Timber Harvest, Interlake Region 79
RO.22 Forest Renewal, Interlake Region 80
RO.23 Expenditure, Interlake Region 81
RO.24 Expenditure, Eastern Region 83
RO.25 Expenditure, Western Region 88
RO.26 Expenditure, Red River Region 90
RO.27 Expenditure, Fire Program 92
RO.28 Number of Fires and Area Burned by Region and Cause 92
RO.29 Number of Fires and Area Burned by Priority Zone and Action Status 92
RO.30 Expenditure, Office of Drinking Water 94
CP.1 Expenditure, Divisional Administration 95
WM.1 Expenditure, Administration 96
WM.2 Water Use Regulation 97
WM.3 Water Power Revenue 98
WM.4 Expenditure, Water Licencing 98
WM.5 Development Review of Water Impacts 100
WM.6 Expenditure, Water Planning and Development 101
WM.7 Hydrometric Station Operation 103
WM.8 Expenditure, Surface Water Management 105
WM.9 Expenditure, Groundwater Management 109
WM.10 Water Quality Management Activities 111
WM.11 Expenditure, Water Quality Management 111
WM.12 Expenditure, Waterway Maintenance 112
PA.1 Expenditure, Administration 113
PA.2 Expenditure, Planning and Development 117
PA.3 Expenditure, Park Districts 118
PA.4 Expenditure, Park Operations and Maintenance 118
PA.5 Expenditure, Support Services 119
AQ.1 Air Quality Activities 120
AQ.2 Expenditure, Air Quality Management 121
FO.1 Expenditure, Administration 122
FO.2 Expenditure, Forest Inventory and Resource Analysis 124
FO.3 Forest Renewal Activities 126
FO.4 Expenditure, Forest Health and Renewal 126
FO.5 Expenditure, Forest Management and Development 129
FO.6 Expenditure, Forest Regeneration Stock 129
FI.1 Expenditure, Administration 131
FI.2 Distribution to Sport Fishing Waters from Fish Hatcheries 132
FI.3 Expenditure, Fish Culture 132
FI.4 Expenditure, Fisheries Habitat Management 134
FI.5 Expenditure, Sport and Commercial Fishing Management 136
FI.6 Angling Licence Sales and Revenue 1992-93 to 2001-02 137
FI.7 Fishermen Employed in Commercial Fishery 2001-02 138

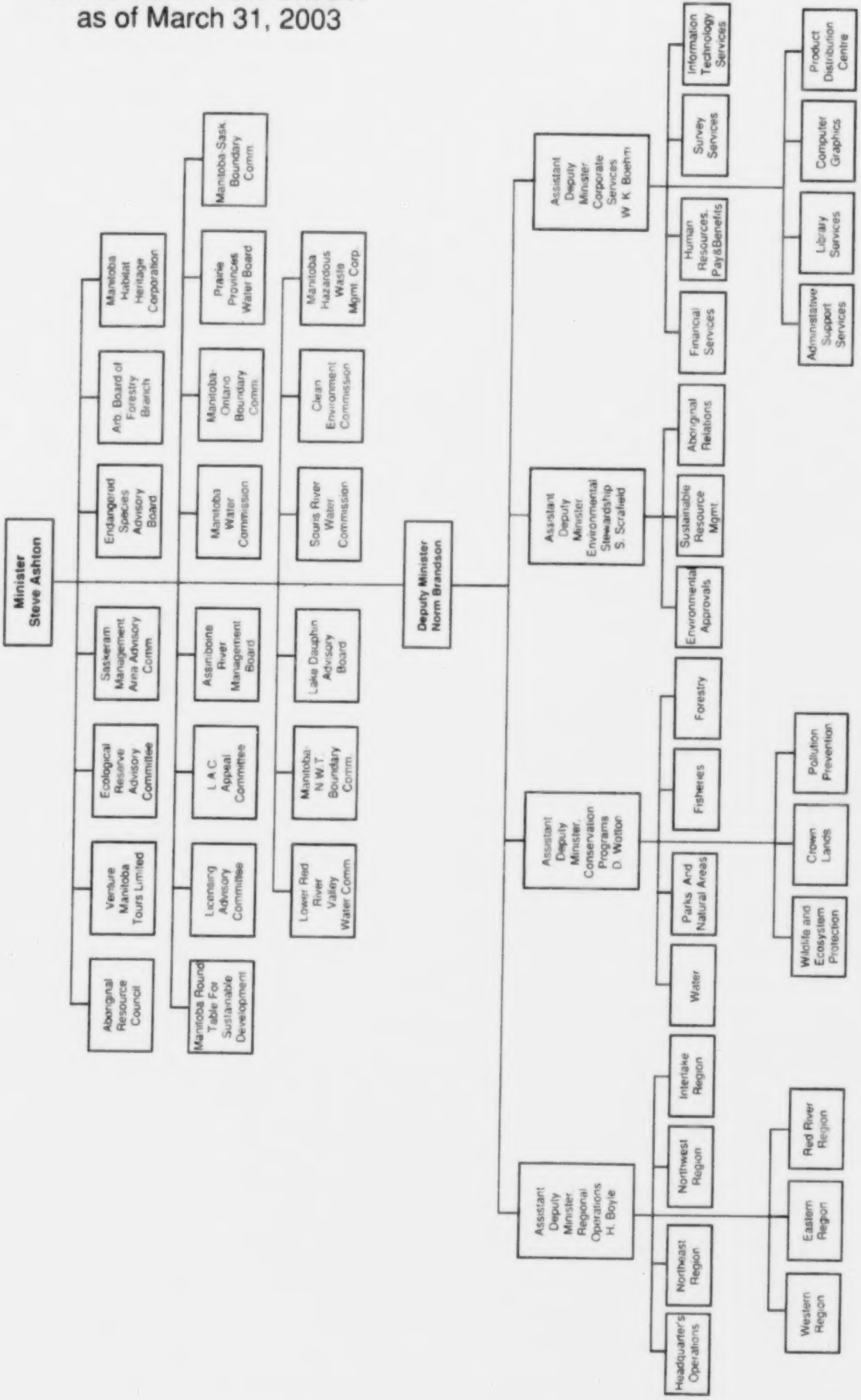
FI.8 Commercial Fishing Production (round kg), Total Value, and Employment (Licenced Fishermen plus Hired Men) 1992-93 to 2001-02 139
FI.9 Commercial Fishing Production (round kg) by Area and Total Value by Species 2001-02 140
FI.10 Expenditure, Northern Fishermen's Freight Assistance 141
FI.11 Expenditure, Fisheries Enhancement Initiative 142
WI.1 Wildlife Permits Issued, 2002 145
WI.2 Expenditure, Administration 146
WI.3 Resident Hunter Big Game Harvest 151
WI.4 Expenditure, Game and Fur Management 153
WI.5 Fur Statistics, Year ending 31 August, 2002 154
WI.6 Trappers and Value of Wild Fur Production 1991-92 to 2001-02 154
WI.7 Hunting Licences Sold 155
WI.8 Hunting Licence Sales and Revenue 1993-94 To 2002-03 156
WI.9 Wildlife Licence Revenue 156
WI.10 Expenditure, Habitat Management and Ecosystem Monitoring 162
WI.11 Status of the Manitoba Conservation Data Centre's Biodiversity Information Database 164
WI.12 Expenditure, Biodiversity Conservation 168
WI.13 Expenditure, *Canada-Manitoba Waterfowl Damage Prevention Agreement* 168
WI.14 Expenditure, Wildlife Habitat Enhancement Initiative 169
P2.1 Material Recovery Rates 2001 172
P2.2 Product from MB Scrap Tires in 2002/03 172
P2.3 SDIF Open Category Funding 178
P2.4 WRAPP Fund 178
P2.5 EYC Summary 179
P2.6 Expenditure, Pollution Prevention 179
LA.1 Treaty Land Entitlement Status 182
LA.2 Expenditure, Crown Lands Operations 183
LA.3 Expenditure, Crown Lands Registry 184
LA.4 Expenditure, Remote Sensing 185
LA.5 Expenditure, Land Mapping Services 186
HE.1 Expenditure, Habitat Enhancement Fund 187
SC.1 Expenditure, Special Conservation and Endangered Species Fund 188
ES.1 Expenditure, Divisional Administration 189
SR.1 Expenditure, Sustainable Resource Management 195
EA.1 Environmental Approvals Activities 197
EA.2 Suspensions or Variations under ***The Environment Act*** 2002-2003 200
EA.3 Expenditure, Environmental Assessment and Licencing 200
AR.1 Expenditure, Aboriginal Relations 202
CE.1 Expenditure, Clean Environment Commission 203
II.1 Expenditure, International Institute for Sustainable Development 204
IM.1 Expenditure, Equipment 205
IM.2 Expenditure, Water Projects 205
IM.3 Expenditure, Park Facilities 206
AC.1 Expenditure, Amortization and Other Costs Related to Capital Assets 207
FP.1 Expenditure, Flood Proofing Programs 208
RE.1 Reconciliation Statement 209
RE.2 Revenue Summary by Source 209
RE.3 Expenditure Summary 210
RE.4 Five-Year Expenditure and Staffing Summary by Appropriation 218

List of Figures

1. Organization Chart 4
2. Staff Time, by Client (Computer Graphics) 55
3. Number of Fires, 1993-2002 93
4. Area Burned, 1993-2002 93
5. Natural Regions of Manitoba 114
6. Game Hunting Areas 147

Figure 1

MANITOBA CONSERVATION ORGANIZATION CHART
as of March 31, 2003


Minister Steve Ashton
Endangered Species Advisory Board
Arb. Board of Forestry Branch
Manitoba Habitat Heritage Corporation
Saskeram Management Area Advisory Comm
Ecological Reserve Advisory Committee
Venture Manitoba Tours Limited
Aboriginal Resource Council
Manitoba Water Commission
Manitoba-Ontario Boundary Comm.
Prairie Provinces Water Board
Manitoba-Sask. Boundary Comm.
Assiniboine River Management Board
L.A.C. Appeal Committee
Licensing Advisory Committee
Manitoba Round Table For Sustainable Development
Souris River Water Commission
Clean Environment Commission
Manitoba Hazardous Waste Mgmt. Corp.
Lake Dauphin Advisory Board
Manitoba-N.W.T. Boundary Comm
Lower Red River Valley Water Comm
Deputy Minister Norm Brandson
Assistant Deputy Minister Corporate Services W. K. Boehm
Financial Services
Human Resources, Pay&Benefits
Survey Services
Information Technology Services
Administrative Support Services
Library Services
Computer Graphics
Product Distribution Centre
Assistant Deputy Minister Environmental Stewardship S. Scrafield
Environmental Approvals
Sustainable Resource Mgmt.
Aboriginal Relations
Assistant Deputy Minister Conservation Programs D. Wotton
Water
Parks And Natural Areas
Fisheries
Forestry
Wildlife and Ecosystem Protection
Crown Lands
Pollution Prevention
Assistant Deputy Minister Regional Operations H. Boyle
Headquarter's Operations
Northeast Region
Northwest Region
Interlake Region
Western Region
Eastern Region
Red River Region

Highlights

Information Technology

- Fifteen modules of the Environmental Management System (EMS) are now deployed throughout the Department, via computer networking technology, to over 100 users. Investigations are underway to acquire and integrate a Drinking Water module into the system. The EMS software has been acquired from the Government of Alberta through a partnership agreement.

- The Manitoba Land Initiative (MLI) data warehouse is now fully operational and available online to the general public via the Intranet. This repository contains all government geospatial GIS data and related databases and meta-data, with interactive mapping tools. The data warehouse now has over 1,600 registered users.

- The new Crown Lands Registry Information System, completed by Information Technology Branch staff, is now completed and has been deployed to over 50 users. Additional users will be brought on line during the course of the next fiscal year.

Regional Operations

- A review and public consultation of the *Livestock Manure and Mortalities Management Regulation* was completed. A number of significant amendments to the regulation were developed, including dropping the regulatory threshold from 400 to 300 animal units, mandatory monitoring of the source of drinking water for livestock in large operations and certification of commercial manure applicators.

- Environmental Livestock Program staff directed clean-up operations at two structural failures of aboveground steel manure storage tanks. The first incident occurred July 21, 2002 near MacGregor and spilled approximately 4,000,000 litres of manure. The second incident occurred March 17, 2003 near Fisher Branch and spilled approximately 2,270,000 litres of manure. Fortunately, clean up was completed rapidly at both sites and widespread contamination did not occur.

- Audits were completed for 28 of the 291 manure management plans (9.6%) registered for the 2002 crop year. Charges were laid against some operators for excessive rates of manure application as well as against some operators who failed to register manure management plans.

- On May 2nd, 2002 at approximately 4:12 P.M. a CN freight train collided with a semi-trailer and derailed near Firdale, Manitoba. Two engines and 21 freight cars were involved, including, four tank cars of benzene/dicyclopentadiene, one tank car of hexene, 11 hopper cars of plastic pellets, two cars of granular fertilizer, one car of glycol, and two empty box cars. A catastrophic release of the hexene and benzene cars resulted in a massive fire that engulfed the other derailed cars. Concerns about the release of toxic by-products of this combustion resulted in the evacuation of approximately 170 local residents and the establishment of a secure perimeter around the site of at least two miles.

- The *Dangerous Goods Handling and Transportation Regulation* was enacted, replacing its predecessor, in effect since 1985. Consequential amendments were also made to three other regulations. These charges reflect Manitoba commitment to a harmonized regulatory approach to dangerous goods and hazardous waste management with the other provinces and the Federal government.

- Office of Drinking Water received 40 proposals for water treatment and distribution, 21 proposals for Certificates of Approval and 15 not requiring certificates; and 75 inspections of waterworks systems were carried out.

- The Eastern Region acquired two Drinking Water Officers to provide regional delivery of Manitoba's Drinking Water Program. Both officers bring considerable technical skills and experience to support the program and ensure a safe public drinking water supply to eastern Manitoba residents.

- Emergency Response Team responded to 507 calls during the year and 369 environmental accidents were reported.

- Parks in the Northwest Region continued to be operated and developed in providing the highest quality experiences. In the face of increasing demands on Manitoba Conservation, the regional staff in partnership with Parks and Natural Areas Branch, local tourist & eco tourist businesses and cottage associations have successfully achieved the 2002 goals and priorities as outlined in the " 2002 Operational Work Plan". Usage by campers continues to increase yearly (420 sites) and we were successful in the redevelopment of the Pioneer Bay campsite with 26 new sites. This new facility, returned to its past, was very well received by campers form all over Canada and the USA with a weekend occupancy rate of 75%. We are continuing to improve services and also support cottaging in the Parks to provide a sustainable life experience and special unique way of life. Water quality within our Northwest Region Parks is of the highest quality and studies done over the last several years by staff have shown both Clearwater Lake and Lake Athapapuskow are of the "EXCELLENT" category as described within the Canadian Council of Ministers of the Environment Water Quality Index. These are definite highlights to be nurtured in our Parks system.

- Infrastructure at the Narcisse Snake Dens was upgraded and improved including a new viewing platform, placement of protective fencing and improvements to the interpretive trails. This site continues to attract thousands of visitors each spring.

- The Western Region continues to meet sustainable resource management and development needs through the use of cooperative partnerships with numerous private and public resource agencies and stakeholder groups. Examples of this during the past year have been:
  - resource sharing discussions with WRTC First Nations;
  - inter-agency cooperative planning for managing TB interactions between wildlife and domestic cattle herds;
  - numerous watershed planning initiatives involving partnerships with Conservation Districts, Rural Municipalities, local wildlife groups, private landowners and local citizens;
  - ongoing productive liaisons with major industry such as Maple leaf and Louisiana Pacific to ensure environmental protection for Manitobans;
  - participation in emergency response initiatives such as the Brookdale pipeline explosion and Firdale CN Rail derailment; and
  - delivery of the Food Safe program with Assiniboine Community College.

- Environment Officers had extensive involvement with the sewage spill clean up and infrastructure repair at the City of Winnipeg North End Pollution Control Centre during the fall of 2002. An investigation report on the spill with recommendations was completed and submitted to the Clean Environment Commission prior to public hearings on Winnipeg's wastewater management systems.

- Trappist Monastery Provincial Park in St. Norbert was officially opened. The ruins at the site provide a good example of a small Canadian monastic complex and exemplify a distinctly French form of architecture imported to the Canadian Prairies.

- The 2002 Polar Bear Alert Program proved to be extremely busy again both in terms of the numbers of bears captured and relocated or held in the Polar Bear Compound and the number of polar bear occurrences recorded by Conservation staff delivering the Program. A total of 121 bears were captured in the control area, which includes the area in and around the Churchill townsite and other road-accessible areas with development in proximity to the townsite. This is the second highest number captured since the Alert Program was started in 1983 (the department has in fact delivered a polar bear program at Churchill since 1967 but major changes were implemented in 1983 and direct comparisons to records collected prior to 1983 are not valid). A total of 209 occurrences were reported in the same control area, which is also the second highest recorded since 1983. By comparison the highest number of bears captured was 142 in 2001 and the highest number of occurrences reported was 227 in 1983. Perhaps more importantly the level of activity supports a recent trend towards a lengthening "problem season" with higher numbers of bears. Between 1983 and 1995 the average number of bears captured and occurrences recorded per year was 46.2 and 114.5; between 1996 and 2002 the average has been 104.9 and 178.1 respectively. Despite this the

Alert Program has continued to meet its primary objectives of protecting people from injury and property from damage by polar bears; however it has resulted in the costs of delivering this highly successful program escalating.

Water Management

- Two major projects for enhancing flood protection in Winnipeg were studied: expanded Red River Floodway, costing $660 million and providing 1-in-700-year-flood protection, and Ste. Agathe Detention Structure, costing $543 million with 1-in-1000-year protection.
- Water use monitoring strategies were implemented on a pilot basis for the Assiniboine Delta and Oak Lake aquifers.
- Provided on-going technical and scientific support on trans-boundary issues related to Devils Lake and Garrison Project.
- Stakeholder-based water management planning for aquifers, watersheds and basins leading to protection and sustainable use of resources was co-ordinated.
- A draft water management plan was completed with the stakeholders of the inter-provincial (Manitoba and Saskatchewan) Swan Lake Basin.
- Final draft of the Manitoba Water Quality Standards, Objectives, and Guidelines were released.
- Clean Environment Commission released their report respecting the "Public Consultation Process" for the Nutrient Management Strategy.
- Designated Flood Area Regulation under *The Water Resource Administration Act* was redrafted to provide increased flood protection.
- In accordance with *Water: A Strategic Plan for Manitoba*, three Task Teams were struck to address legislative framework, watershed management planning and financial underpinnings.
- *The Drinking Water Safety Act* was passed.
- Pilot projects were established with Whitemud Conservation District and Cooks Creek Conservation District to receive, review and make recommendations on drainage licensing complaints and licence applications.
- Prepared forecasts and provided information to flood fighters for a major summer storm in southeastern Manitoba and the resulting flooding on the Roseau River.
- Provided technical support to the Lake Manitoba Regulation Review Committee in their study to determine the most acceptable regulation regime for Lake Manitoba.
- Directed and assessed the impact of the first summer operation of the Red River Floodway. Also commissioned a technical review of the benefits and impacts of summer operation.
- Completed $18.3million further flood protection for homes/businesses, community dykes and related program elements under the *Canada-Manitoba Flood Proofing Agreement*.
- Ensured performance and public safety by maintaining and refurbishing important flood-protection works such as Red River Floodway , Portage Diversion Works , and Assiniboine River dykes.
- Prepared revisions to The Water Rights Act Regulations to allow for Ministerial approval of application forms and licences.

Parks and Natural Areas

- Two new provincial parks were established in 2002/03. Caribou River Wilderness Park and Trappist Monastery Heritage Park were designated with public and community support. Manitoba's park system now includes 77 parks.

- Consultations toward the designation of South Atikaki were completed. East Paint Lake and Manigotagan River Park Reserves were extended for a further five years to complete the consultations required for permanent designations, and the Criddle\Vane Homestead Park Reserve was created. Consultations were initiated regarding the future designations of the Manigotagan and Chitek Lake Park Reserves. A study for a proposed protected area in the Porcupine Mountains was largely completed.

- The management plan for Atikaki Park and Bloodvein Canadian Heritage River entered its final stage and will be finalized in 2003. The Grand Beach Management Plan is currently being implemented and the second round of drop-in sessions for the management plan at Duck Mountain Provincial Park will be completed in the summer of 2003.

- The Ecological Reserves Advisory Committee recommended to the Minister four sites for designation as ecological reserves.

- About 5.1 million people visited Provincial Parks in 2002-03. There were 5,830 campsites available, which included 4,287 transient sites, and 1,543 seasonal sites. 170,841 transient camping nights and 44,880 seasonal nights were recorded.

- The Parks Reservation Service placed more campers onto sites through reservation than ever before. There were 33,754 reservations, an increase of 1,000 over last year. Reservations were offered in 38 campgrounds, 25 group-use areas and two cabin locations.

- Interpretative programs included a full-time interpreter at Birds Hill and 21 seasonal interpreters at 10 major Provincial Parks. Interpreters contacted 81,495 visitors at field programs and in interpretative centres and museums. Improvements were made to 7 interpretive trails.

- The Third Edition of *The Cottager's Handbook* was printed and distributed.

- Major initiatives underway to improve the experience of park users included:

    - Work was initiated on expanding the Parks Reservation Service to include Internet Reservations;
    - A comprehensive waterfront safety strategy for provincial parks addressing public communication, risk management, signing and contracted programming was prepared and implementation begun;
    - A development strategy was prepared for the provincial camping and cottage initiative;
    - A comprehensive trail and trail signing system was developed for Pembina Valley and a trail plan was initiated for Hecla/Grindstone;
    - A design was prepared for a commercial plaza and buildings at Grand Beach;
    - Design and tendering was implemented for a major Falcon Lake Waterfront enhancement project;
    - Marketing initiatives included the development of a comprehensive communication strategy with Manitoba, Culture, Heritage and Tourism; and
    - The Provincial Parks Guide was redesigned and a variety of publications were reprinted.

- Park improvements included:

    - Campsite expansion, electrification and re-development was undertaken in the Whiteshell (Big Whiteshell and Falcon Lakes), and at Paint Lake;
    - Campground development at Clearwater Lake (Pioneer Bay Campground) was completed;
    - Levelling, sanding and upgrading of the lake at Birds Hill continued;
    - Washroom buildings were upgraded throughout the system;
    - The resurfacing of Grand Beach roads including widening of bicycle lanes was completed;
    - Water system upgrades were done at Caddy and White Lakes and St. Ambroise Provincial Park;
    - Disability access programs (campsite and washroom modifications) were continued;
    - Trails were improved or expanded throughout the system; and
    - New group areas were completed at St. Malo.

Forestry

- The Forestry Branch implemented the second year of a three-year agreement with Louisiana Pacific Canada Ltd. to complete a new Forest Lands Inventory for the Duck and Porcupine Provincial Forests (Mountain Forest Section).

- A Memorandum of Understanding was negotiated with Forestry Canada to establish a series of long term ecosystem monitoring plots in Manitoba to measure Provincial, National & Inter-national reporting requirements related to forest sustainability and climate change.

- The Department and industry carried out forest renewal treatments on 9,950 hectares, including retreatments. Most of the area was planted (13.3 million trees), with scarification to promote natural regeneration on the rest.

- Regeneration surveys to determine success of forest renewal were performed on 11,903 hectares. The Forestry Branch surveyed 4,634 hectares while licensed regeneration surveyors from Tolko surveyed 1,699 hectares, Louisiana-Pacific surveyed 1,626 hectares, and Tembec surveyed 3,944 hectares.

- Spruce budworm infested about 111,480 hectares of forest in Manitoba, much of which had low or declining defoliation levels. Emergency funding was provided to enable spraying biological insecticide, Mimic, on 17,538 hectares in Athapapuskow Lake area (Tolko).

- As of March 31, 2003, 9,517 elms were removed from 38 cost-share communities and seven urban-buffer-zone municipalities. Due to excellent working conditions through winter, crews removed the backlog (removals are up-to-date for the first time in several years).

- The first phase of UFIS (Urban Forestry Information System) was completed in March 2003. UFIS, which was developed by a team of six University of Winnipeg Business Computing students, is a sophisticated data base system that is designed for tracking diseases and pests in urban forests. It will be used for tracking of DED surveys and tree removals and elm firewood in the Manitoba communities participating in the DED management program.

- With the support of Manitoba, Conservation the Chemawawin Cree Nation and Tolko Industries Ltd., Manitoba Solid Wood Division entered into a Partnership Arrangement for management and harvesting of timber in portions of the Interlake Forest Section previously part of Tolko's Southern Area. The arrangement will continue until March 2004 by which time an assessment of the success of the partnership will be conducted and a long-term agreement considered.

- The province deleted the "Southern Area" of Tolko's Forest Management Licence Area in accordance with the terms of the December 1998 agreement between Repap and the Province. Future decisions regarding the allocation of timber and management responsibilities in the area await a wood supply analysis of the area. In the interim, at the province's request, the Mountain Quota Holders Association developed a three-year Operating Plan and have applied for an Environmental Licence to cover remaining forestry operations at existing levels.

- Two guidelines on *Pre-Harvest Surveys* and *Protection of Softwood Understorey in Mixedwood and Hardwood Forests* were published and placed on a newly established website at **http://www.gov.mb.ca/conservation/forestry/forest-practices/practices/fpp-guideline-pdfs.html** while work continued on guidebooks related to *Forest Roads* and *Brush Disposal*.

- Three trials involving forest practices were conducted in 2002; a flexible utilization trial to top harvested trees at diameters between 3 ad 4" in selected Forest Management Units in northern Manitoba, and a roadside limbing trial in conjunction with the flexible utilization trial.

- The Forestry Branch worked with Manitoba Industry, Trade and Mines to represent Manitoba in U.S. Department of Commerce's countervail investigation of softwood lumber imports from Canada. The Branch provided questionnaire responses, co-ordinated the company exclusion process, and participated in bilateral discussions to find a non-litigated solution to the trade dispute.

- Palliser Furniture's special allocation has been renewed for an additional five-year period. The extension included a new provision for Palliser Furniture to form partnerships with First Nations in the Interlake to harvest or market a portion of the allocation.

- The Forestry Branch also completed several projects with the Canadian Forest Service, Northern Forestry Centre, with the publication of primary and secondary wood users directories and an updated version of the *Manitoba's Forests* publication.

Fisheries

- The Fisheries Sustainable Development Web site, developed to integrate sustainable development concepts into the new Kindergarten-Grade to Senior IV *Science: Manitoba Curriculum Framework of Outcomes*, continues to be an innovative and valuable tool for integrating fisheries information into science curriculum via the Internet. The site was promoted at teacher workshops and conferences, including the Special Areas Group (Science) workshop. Work will continue with educators to develop exercises for Grades Senior I to IV, for implementation in fall 2003.

- At Whiteshell Fish Hatchery, the Visitor Centre was operated for the second year. Tours were given to over 4,100 people from May to the September long weekend. The Centre provides a sheltered area to begin tours, washrooms, and drinking water. Interpretative exhibits include information on species reared at the Hatchery, life stages of fish, how water is used, history of the Hatchery, and ecosystem interaction.

- The Fisheries Branch continued to participate in the national Recreational Fishing Task Group and co-chair the national Freshwater Fish Strategy Task Group. These Groups, reporting to Canadian Council of Fisheries and Aquaculture Ministers, are developing co-ordinated action plans that involve stakeholders and maximize management efficiency and effectiveness. Key actions under the Freshwater Fish Strategy include a national workshop to assist developing an action plan Same as last year's highlights.

- New for 2002, Winnipeg's Urban Angling Partnership, working with City Cats Guiding Service, provided Winnipeg residents with an opportunity to participate in the first annual fall Urban Fishing Derby.

- Recreational Fishing League, for youth aged 9-15 years, entered its third year. Thirteen teams of six to eight children and two coaches, fished once a week for six weeks. Teams were awarded points by lengths of fish caught to determine a League winner. Results were posted on a Website to allow participants to follow League action. Partners included Manitoba Wildlife Federation, Mid-Canada Marine Dealers Association, Pure Fishing (Berkley Canada), and Recreation Connections. An expanded program is planned for 2003 with Manitoba Wildlife Federation as lead organization.

- The third phase of the Fisheries Information Corporate Database was completed. The system will provide staff with efficient and effective access to fisheries information. Continued development will incorporate remaining database systems. How many phases are there? When will it be completed?

- In its 10th year, the Fisheries Enhancement Initiative has funded 240 projects directed at enhancing fish populations and their habitat, as well as funding educational opportunities. Ongoing stream bank restoration through fencing, off shore waterers, controlled crossings and revegetation work continues on Stoney Creek and Brookdale Drain. In some areas, site specific restoration was done to demonstrate the effectiveness of soil bioengineering techniques and the importance of riparian areas to aquatic ecosystems (Birdtail and Boyne Rivers). This year, educational opportunities funded were development of an aquatic field station at Fort Whyte Center, a fisheries educational programming at the North American Wildlife Enforcement Memorial Museum at the International Peace Gardens and the Sandilands Forest Center at Hadashville and the printing of "The Freshwater Fishes of Manitoba' publication.

- The Fisheries Branch partnered with the Manitoba Arts Network to celebrate and promote the Fisheries Enhancement Initiative fund and annual stamp competition.

Wildlife and Ecosystem Protection

- Youth Hunting Licence Package sales for deer and upland game birds continue to increase to 3,400.
- Normal winter conditions in most areas; winter mortality was average on some deer ranges.
- Province-wide Sunday was hunting introduced for upland game birds and waterfowl.
- Rifle deer season was lengthened in Deer Zones D and E, and is now three weeks everywhere.
- Populations of barren-ground caribou are stable or increasing; coastal herds are stable.
- Monitoring Bovine Tuberculosis (TB) in wild ungulates in Riding Mountain area continued for fifth year.
- The new Problem Beaver Winter Subsidy Program was successful in increasing the beaver harvest by trappers and putting an additional $240,000 into trappers' pockets.
- The Department signed a predator control contract with the Manitoba Trappers Association to have members manage predator problems for livestock producers.
- The number of graduates from the Mandatory Trapper Education Course was 250, double from last year.
- A new Problem Black Bear Policy was developed by the Problem Black Bear Committee and sent to the Department Executive and Minister for approval.
- Urban Goose Working Group continued to investigate problems with geese in and around Winnipeg, with emphasis on airport safety.
- Volunteer-based Dragonfly Survey has identified over 1,400 specimens (including nine species new to Manitoba) since 1999.
- Conservation Data Centre's computer biodiversity database (over 4,000 mapped priority species occurrences) transitioned to a newer version of Biotics®. This will result in more accurate mapping of species locations for conservation planning.
- Surveys of 25 rare plant species produced 30 new records and 41 updated occurrence records. This included three new records of roundleaf monkey-flower, a priority species for assessment by COSEWIC.
- Continued involvement in Canadian National Vegetation Classification project, in partnership with NatureServe, government of Canada, and NGOs.
- An update to the province's check list of spiders, supported by the Biodiversity Conservation Section, noted 534 species currently found in Manitoba, up from 483 reported in 1992. New species included a number of previously unidentified specimens held at the University of Manitoba's J. B. Wallis Museum, and species newly discovered in field collections.
- Partnered with Nature Conservancy Canada to develop conservation plans for southeastern Manitoba.
- 225 volunteers completed 138 survey routes for the 2002 Nocturnal Owl Survey. Survey. The survey was significantly expanded in 2002 assisted by Manitoba Hydro and Delta Marsh Bird Observatory. The results are reported at www.gov.mb.ca/conservation/wildlife/involved/pdf/owl_survey_2002.pdf
- The work of Recovery Action Groups focused on the *endangered* eastern loggerhead shrike, Piping Plover, and the Peregrine Falcon; partners included Manitoba Cattle Producers Association, Ducks Unlimited, Manitoba Hydro, Portage Naturalists, City of Winnipeg, Environment Canada's Habitat Stewardship Program and private landowners.
- In partnership with the Nature Conservancy of Canada and The Nature Conservancy (USA), initiated the development of a landscape-scale conservation plan for the Tallgrass Aspen Parklands landscape in southeastern Manitoba.
- Monitoring of radio-collared Woodland Caribou continued in the Owl Lake and Atikaki–Berens range. The GPS collars placed in 2001-2002 were retrieved from the animals; data was downloaded from the collar, new batteries installed and new units were deployed.
- Number of land-use proposals reviewed for wildlife habitat impacts decreased by 50% over last year.
- Extensive monitoring of soil and vegetation continued at permanent monitoring sites near Thompson to assess the long-term effects of emissions from the INCO smelter on boreal forest ecosystems.
- Sampled soil and vegetation at ARNEWS (Acid Rain National Early Warning System) sites as a bio-monitoring tool to determine if pollutants (includes particulates, metals and acid rain) or climate change may be affecting the health of forest ecosystems.
- Conducted a study of heavy metals in private gardens and possible accumulations in vegetable crops in Flin Flon.

- Conducted detailed monitoring of surface water pools in Gull Lake Bog to determine impact of hydrological changes on vegetation.
- Completed report *"Metal Concentrations in Surface Soils of Thompson, Manitoba, September 2001,"* and a draft report on the Flin Flon Blueberry Study.
- Reports are being prepared for the *Flin Flon Garden Study* and *Fate of Metals in Thompson Soils.*
- Co-operative Manitoba Habitat Heritage Corporation and Manitoba Conservation Habitat Stewardship Program for Species at Risk projects accessed a total of $481.5 for projects to identify and secure significant Manitoba habitats.
- WMA program includes the addition of lands to the Brandon Hills, Proven Lake, Clematis and Sleeve Lake WMAs.
- Co-operated with Tourism Development in the design and fabrication of a new entrance sign for the Churchill WMA (to be placed on site this June).
- Delta Marsh - Viewing opportunity was enhanced at the Delta Marsh Heritage Marsh sign site located on PR 240. As part of the development plan for the site, a walking trail and canoe launch site was developed from the sign along the channel to Cadham Bay.
- Oak Hammock Marsh - improvements to the dyke infrastructure were undertaken to maintain public safety. Access ramps were constructed to facilitate access by department motorized watercraft for management purposes.
- Ducks Unlimited Canada provided the first deliverable of their Western Boreal Forest Initiative's, Pasquia Project Area, the Pasquia Earth Cover Classification, in March 2003.
- The Manitoba Purple Loosestrife Project raised and released 18,000 beetles in Manitoba marshes in 2002 to control the spread of purple loosestrife.

Sustainable Resource Management

- *The Polar Bear Protection Act* and *The Security Management Act* received Royal Assent and were proclaimed into force. *The Drinking Water Safety Act* and *The Resource Tourism Operators Act* received Royal Assent.

- The Sustainable Resource Management Branch participated in the preparation of *The Manitoba Water Strategy*. The strategy provides for integrated water planning, consolidation of a number of water acts and address weaknesses and gaps in existing legislation.

- About 1200 resource-based tourism licenses for hunting, fishing and ecotourism lodges, outcamps and outfitter services were issued.

- Through participation on working groups established to implement *The Sustainable Development Act*, the Sustainable Resource Management Branch assisted in development of:
  - draft annual report guidelines used to guide reporting of progress made at integrating sustainable development in the operations on government departments; and
  - a draft sustainable development procurement and financial management guidelines regulation which will govern municipalities, school divisions, regional health authorities, colleges and universities.

  A draft *Provincial Sustainability Report* was also initiated and the Branch participated in the development of Manitoba Conservation's sustainable development procurement action plan.

- The Sustainable Resource Management Branch co-ordinated the Manitoba Round Table for Sustainable Development's Awards of Excellence Banquet which took place in November 2002 and was attended by some 400 people;

- The Sustainable Resource Management Branch continued to co-ordinate the East Side Lake Winnipeg Broad Area Planning Initiative. During the year cabinet approved the establishment of the East Side Lake Winnipeg Round Table; the Minister approved the Round Table Terms of Reference; a Community Liaison Co-ordinator was hired; and a public meeting schedule was developed.

Environmental Assessment and Licencing

- *Water and Wastewater Facility Operators Regulation* was passed into law. The Branch has worked with Red River College and other stakeholders to develop training materials and courses for operators of water and wastewater facilities.
- A major environmental review of the Midwest Food Products potato processing facility has been undertaken in response to groundwater concerns.
- The Branch made submissions at the public hearings held by the Clean Environment Commission on the City of Winnipeg's sewage treatment plants.
- Hydro Projects: Manitoba Hydro filed *Proposals* for Wuskwatim generating station and associated transmission lines. Draft EIS Guidelines were prepared and finalized after government and public review and comment and CEC public review completed. Staff prepared a public document outlining all comments received respecting the Draft EIS Guidelines and action taken to revise the Guidelines where appropriate. EIS's for the two proposals were filed in April 2003. Requirements of the *Canada-Manitoba Agreement on Environmental Assessment Co-operation* will ensure thorough and comprehensive environmental assessment and review.
- Flood Protection Works and irrigation development: Participated in and provided technical support for, several flood protection studies. Significant involvement in pre-licencing activities associated with the City of Winnipeg proposed flood protection project. Continued participation on Federal/Provincial Committees and Working Groups on planning and regulation of irrigation development.
- Province of Manitoba Water Strategy: Significant staff contribution to the development of the Water Strategy through participation in key role on working groups.
- Pesticide Regulations: Health Canada continued with their *Action Plan for Urban Use Pesticides*, developed in partnership with provincial and territorial governments. A main objective is reducing pesticide use on lawns by applying Integrated Pest Management principles emphasising prevention, reduced-risk products, and pesticide application only when necessary. Pesticide Classification Implementation Working Group produced *A Proposal For A National Pesticide Classification System For Canada* to harmonize federal and provincial classification systems. Consultation with interested stakeholders was commenced.
- West Nile Virus: with federal, provincial and territorial ministries, Manitoba Health continued with a comprehensive, co-ordinated, and pro-active *Risk Management Plan* to respond to West Nile Virus.

Points saillants

Technologie de l'information

- Quinze modules du système de gestion environnementale (SGE) sont maintenant à la disposition de plus de 100 utilisateurs en réseau du ministère. On étudie présentement la possibilité d'acquérir un module relatif à l'eau potable et de l'intégrer dans le système. On a acquis le logiciel SGE grâce à une entente de partenariat avec le gouvernement de l'Alberta.

- Le dépôt de données de l'Initiative des terres domaniales est maintenant entièrement opérationnel et est offert en ligne au grand public sur l'intranet. Le dépôt de données renferme toutes les données géospatiales SIG du gouvernement ainsi que les bases de données et métadonnées y afférentes et des outils de mappage interactifs. Plus de 1 600 utilisateurs sont inscrits au dépôt de données.

- Le nouveau système d'information du registre informatisé des terres domaniales, élaboré par le personnel de la Direction des technologies de l'information, est maintenant achevé et mis à la disposition de plus de 50 utilisateurs. D'autres utilisateurs pourront y accéder au cours du prochain exercice.

Opérations régionales

- On a révisé le *Règlement sur la gestion des animaux morts et des déjections du bétail* et consulté le public sur cette question. De nombreuses modifications au règlement ont été élaborées, notamment la réduction du seuil réglementaire de 400 à 300 unités animales, la surveillance obligatoire des sources d'eau potable destinée au bétail dans les grandes exploitations, et la certification des applicateurs professionnels de déjections.

- Le personnel du programme de gestion écologique du bétail a mené deux opérations de nettoyage des dégâts causés par la rupture structurale de grandes citernes à lisier en acier hors sol. Le premier incident est survenu le 21 juillet 2002 près de MacGregor, et environ 4 000 000 de litres de lisier ont été déversés. Le second incident est survenu le 17 mars 2003 près de Fisher Branch, et environ 2 270 000 litres de lisier ont été répandus. Heureusement, le nettoyage a été effectué rapidement sur les deux emplacements et on a pu prévenir une contamination généralisée.

- On a terminé la vérification de 28 des 291 plans de gestion des déjections du bétail (9,6 %) inscrits durant la campagne agricole 2002. Des accusations ont été portées contre des exploitants qui ont épandu des quantités excessives de déjections, et contre d'autres qui ont omis d'inscrire leurs plans de gestion des déjections du bétail.

- Le 2 mai 2002, vers 16 h 12, un train de marchandises du CN est entré en collision avec une semi-remorque et a déraillé près de Firdale, au Manitoba. Deux locomotives et 21 wagons de marchandises ont été impliqués, notamment quatre wagons-citernes chargés de benzène-dicyclopentadiène, un wagon-citerne chargé d'hexène, 11 wagons-trémie contenant des billes de plastique, deux wagons chargés d'engrais granulé, un wagon contenant de l'éthylèneglycol et deux wagons couverts vides. Des fuites catastrophiques d'hexène et de benzène ont provoqué un incendie considérable qui a enveloppé les autres wagons déraillés. L'émission de sous produits toxiques durant l'incendie a été sujet d'inquiétude et a donné lieu à l'évacuation d'environ 170 résidents locaux et à l'établissement d'un périmètre de sécurité d'au moins deux milles autour du brasier.

- Le *Règlement sur la manutention et le transport de marchandises dangereuses* a été adopté en remplacement de l'ancien règlement, en vigueur depuis 1985. Des modifications corrélatives ont également été apportées à trois autres règlements. Ces changements illustrent bien l'engagement du Manitoba à harmoniser son approche, de réglementation relative aux marchandises dangereuses et à la gestion des déchets dangereux avec celles des autres provinces et du gouvernement fédéral.

- L'Office de l'eau potable a reçu 40 propositions relatives au traitement et à la distribution de l'eau, 21 propositions nécessitant un certificat d'approbation et 15 n'en nécessitant aucun, et 75 inspections des réseaux d'aqueducs ont été effectuées.

- La région de l'Est dispose maintenant des services de deux agents du Service de l'eau potable qui voient à la prestation, à l'échelle régionale, du Programme de salubrité de l'eau potable du Manitoba. Les agents usent de leur grande expérience et de compétences techniques importantes pour soutenir le programme et maintenir une source d'approvisionnement en eau potable sécuritaire pour les habitants de l'Est du Manitoba.

- L'équipe d'intervention d'urgence a répondu à 507 appels durant l'année, et 369 accidents environnementaux ont été signalés.

- On a continué à exploiter et à développer les parcs de la région du Nord-Ouest de manière à ce que des expériences de qualité y soient offertes. En raison de l'accroissement des demandes auprès de Conservation Manitoba, le personnel régional, en collaboration avec la Direction des parcs et des zones naturelles, des entreprises touristiques et écotouristiques locales et des associations de propriétaires de chalets, a réussi à atteindre les objectifs et à répondre aux priorités décrits dans le plan de travail opérationnel de 2002. Le nombre de campeurs continue à augmenter chaque année (420 emplacements) et nous avons réaménagé avec succès le terrain de camping Pioneer Bay, qui compte maintenant 26 nouveaux emplacements. Ce nouveau terrain réaménagé a été très bien accueilli par les campeurs de partout au Canada et des États-Unis, et son taux d'occupation durant les fins de semaine s'élevait à 75 %. On continue à améliorer les services et à encourager les gens à louer des chalets dans les parcs, car ils offrent une expérience durable et constituent un mode de vie unique. La qualité de l'eau dans nos parcs de la région du Nord-Ouest est l'une des meilleures, et des études effectuées par notre personnel au cours des dernières années ont montré que l'eau des lacs Clearwater et Athapapuskow est classée « EXCELLENTE » selon l'indice de la qualité des eaux du Conseil canadien des ministres de l'environnement. Ces particularités doivent être protégées dans notre réseau de parcs.

- L'infrastructure des nids de couleuvres de Narcisse a été améliorée, notamment par l'ajout d'une plate-forme de visualisation, l'installation de clôtures protectrices et la mise en valeur des sentiers d'interprétation. Ce lieu continue à attirer des milliers de visiteurs chaque printemps.

- La région de l'Ouest continue à répondre aux besoins en matière de gestion et de développement durables des ressources par l'entremise de partenariats coopératifs avec bon nombre d'organismes ressources publics et privés et de groupes d'intervenants. En voici certains exemples :
    - tenue de discussions sur le partage des ressources avec les Premières nations du West Region Tribal Council (WRTC);
    - planification conjointe interorganisation sur la gestion des interactions entre les animaux sauvages et les troupeaux de bovins d'élevage pouvant contribuer à la transmission de la tuberculose bovine;
    - mise en œuvre de diverses initiatives d'aménagement des bassins versants impliquant des partenariats entre des districts de conservation, des municipalités rurales, des groupes locaux de la faune, des propriétaires fonciers privés et des résidents locaux;
    - établissement de liens fructueux avec de grandes industries comme Maple Leaf et Louisiana Pacific pour assurer la protection de l'environnement au Manitoba;

  - participation à des initiatives d'intervention d'urgence comme celles menées après l'explosion du pipeline de Brookdale et le déraillement d'un train du CN à Firdale;
  - prestation d'un programme sur la sécurité alimentaire au Assiniboine Community College.

- Les agents de l'environnement ont participé activement aux opérations de nettoyage après le déversement d'eaux usées et de réparation de l'infrastructure au North End Water Pollution Control Centre de la Ville de Winnipeg, à l'automne 2002. Un rapport d'enquête sur le déversement comprenant certaines recommandations a été préparé et soumis à la Commission de protection de l'environnement avant la tenue des audiences publiques sur les systèmes de traitement des eaux usées de Winnipeg.

- On a procédé à l'ouverture officielle du parc provincial du Monastère-des-trappistes, à Saint-Norbert. Les ruines du site sont un bon exemple de petit complexe monastique canadien, et constituent un type nettement français d'architecture importée vers les Prairies canadiennes.

- Le programme Alerte aux ours polaires de 2002 a encore une fois été très occupé autant au niveau du nombre d'ours capturés et relogés ou détenus dans l'enceinte pour ours polaires, qu'au niveau du nombre d'apparitions d'ours polaires enregistrées par le personnel du ministère de la Conservation responsable du programme. On a capturé un total de 121 ours dans la zone contrôlée, qui comprend le lotissement urbain de Churchill et la région environnante, ainsi que d'autres secteurs aménagés des environs accessibles par la route. Il s'agit de la deuxième capture d'ours en importance depuis le début du programme Alerte aux ours polaires en 1983. (Le ministère gérait un tel programme à Churchill depuis 1967, mais des changements importants y ont été apportés en 1983, ce qui fait que toute comparaison directe avec les registres tenus avant cette date n'est pas valide.) Un total de 209 apparitions ont été signalées dans la même zone contrôlée. On a enregistré un nombre plus élevé d'apparitions d'ours seulement une fois depuis 1983. En comparaison, on a capturé 142 ours en 2001 et enregistré 227 apparitions en 1983. Plus important encore, le niveau d'activité suit une nouvelle tendance en faveur du prolongement de la « saison problématique » chez un nombre croissant d'ours. Chaque année, entre 1983 et 1995, on a capturé en moyenne 46,2 ours et aperçu 114,5 ours. Toutefois, entre 1996 et 2002, ces moyennes s'élevaient respectivement à 104,9 et à 178,1. Malgré cela, le programme Alerte aux ours polaires continue de répondre à ses principaux objectifs qui sont de protéger les gens et les propriétés contre les ours polaires. Toutefois, les coûts de fonctionnement de ce programme très prisé ont augmenté de manière importante.

Gestion des cours d'eau

- Deux projets importants visant à améliorer les ouvrages de protection contre les inondations dans la Ville de Winnipeg ont été étudiés : l'élargissement du canal de dérivation de la rivière Rouge, projet de 660 millions de dollars offrant une protection contre une crue qui risque de se produire une fois tous les 700 ans, et la construction d'une structure de rétention à Sainte-Agathe, projet de 543 millions de dollars offrant une protection contre une crue qui risque de se produire une fois tous les 1 000 ans. La Province a décidé de procéder à l'élargissement du canal de dérivation de la rivière Rouge.
- Des stratégies de surveillance de l'utilisation de l'eau ont été mises en œuvre à titre de projet pilote au niveau des formations aquifères du Delta de la rivière Assiniboine et du lac Oak.
- On a fourni des conseils techniques et scientifiques continus sur des questions transfrontalières relatives à Devil's Lake et au projet de la rivière Garrison.
- On a coordonné des plans de gestion des eaux fondés sur les intervenants relatifs aux formations aquifères, aux bassins versants et aux bassins visant à protéger les ressources et à les exploiter de manière durable.
- On a élaboré une ébauche de plan de gestion des eaux avec les intervenants interprovinciaux (Manitoba et Saskatchewan) relativement au bassin de Swan Lake.

- On a publié la version définitive de *Manitoba Water Quality Standards, Objectives, and Guidelines.*
- La Commission de protection de l'environnement a publié son rapport sur le processus de consultation publique relatif à la Stratégie de gestion des nutriments.
- On a remanié le *Règlement sur les zones inondables reconnues* afférent à la *Loi sur l'aménagement hydraulique* de manière à accroître la protection contre les inondations.
- Conformément au document *Water: A Strategic Plan for Manitoba*, trois groupes de travail ont été formés pour examiner les questions relatives au cadre législatif, à la planification de l'aménagement des bassins versants et aux bases financières.
- La *Loi sur la qualité de l'eau potable* a été adoptée.
- On a élaboré des projets pilotes nécessitant que les districts de conservation de Whitemud et de Cooks Creek recueillent, examinent et formulent des recommandations sur les plaintes relatives aux permis de drainage et sur les demandes de permis.
- On a fait des prévisions et fourni de l'information aux responsables de la lutte contre les inondations relativement à un important orage d'été dans le sud-est du Manitoba et au débordement subséquent de la rivière Roseau.
- On a offert un soutien technique au conseil consultatif de révision des règlements relatifs au lac Manitoba durant son étude visant à déterminer quel régime de réglementation conviendrait le mieux au lac Manitoba.
- On a géré et évalué l'impact de la première mise en exploitation estivale du canal de dérivation de la rivière Rouge. On a aussi commandé un examen technique des avantages et des impacts de la mise en exploitation estivale.
- On a achevé davantage de travaux de protection contre les inondations, au coût de 18,3 millions de dollars, destinés aux résidences et aux entreprises, à la construction de digues communautaires et à d'autres projets connexes, dans le cadre de l'*Entente Canada-Manitoba concernant la construction d'ouvrages de protection contre les inondations*.
- On a amélioré l'efficacité et assuré la sécurité publique en remettant en état d'importants ouvrages de protection contre les inondations, et en entretenant des ouvrages tels que le canal de dérivation de la rivière Rouge, le canal de dérivation Portage et les digues de la rivière Assiniboine.
- On a préparé les modifications devant être apportées au *Règlement sur les droits d'utilisation de l'eau* afin de permettre la ratification par le ministre des formules de demande et des permis.

Parcs et zones naturelles

- Deux nouveaux parcs provinciaux ont été établis en 2002-2003. Le parc sauvage de la Rivière-Caribou et le parc du patrimoine du Monastère-des-trappistes ont été désignés grâce aux fonds publics et communautaires. Le réseau des parcs du Manitoba compte maintenant 77 parcs.

- On a mis fin aux consultations sur la désignation du parc provincial Atikaki-Sud. Les réserves de parcs du Lac-Paint-Est et de la Rivière-Manigotagan seront maintenues pour une période supplémentaire de cinq ans afin de permettre l'achèvement des consultations nécessaires pour leur accorder une désignation permanente. On a également établi la Réserve de parc du homestead Criddle-Vane. On a entrepris des séances de consultation concernant la désignation des réserves de parcs de Manigotagan et du lac Chitek. On a également achevé l'étude d'une proposition portant sur la création d'une zone protégée aux monts Porcupine.

- On met la touche finale au plan de gestion relatif au parc provincial Atikaki et à la rivière du patrimoine canadien Bloodvein, et celui-ci devrait être terminé en 2003. On met présentement en œuvre le plan de gestion relatif au parc provincial de Grand Beach, et on prévoit terminer les deuxièmes consultations publiques sur le plan de gestion relatif au parc provincial Duck Mountain à l'été 2003.

- Le Comité consultatif sur les réserves écologiques a fait des recommandations au ministre sur la désignation en tant que réserves écologiques de quatre sites particuliers.

- Environ 5,1 millions de personnes ont visité les parcs provinciaux en 2002-2003. 5 830 emplacements de camping étaient disponibles, y compris quelque 4 287 emplacements de passage et 1 543 emplacements saisonniers. On a enregistré 170 841 nuitées en camping de passage et 44 880 en camping saisonnier.

- Le Service de réservation des parcs a placé davantage de campeurs sur les emplacements par le biais de réservations qu'auparavant, et 33 754 réservations ont été inscrites, soit une hausse de 1 000 par rapport à l'année dernière. Trente-huit terrains de camping offraient un service de réservation, ainsi que 25 emplacements de groupe et deux chalets.

- Les programmes d'interprétation comprenaient un guide-interprète à temps plein à Birds Hill et 21 guides-interprètes saisonniers dans dix importants parcs provinciaux. Les guides-interprètes ont accueilli 81 495 visiteurs dans le cadre de programmes en plein air, dans des centres d'interprétation et dans des musées. On a apporté des améliorations à sept sentiers d'interprétation.

- On a imprimé et distribué la troisième édition du *Cottager's Handbook*.

- Parmi les initiatives importantes présentement en cours qui visent à rendre l'expérience des visiteurs des parcs plus agréable, mentionnons ce qui suit :

    - on a entrepris d'améliorer le Service de réservation des parcs de manière à permettre les réservations sur Internet;
    - on a élaboré et entrepris la mise en œuvre d'une importante stratégie sur la sécurité au bord de l'eau dans les parcs provinciaux axée sur les communications au public, la gestion des risques, l'affichage et les programmes à forfait;
    - on a préparé une stratégie de développement de l'initiative provinciale sur les campings et les chalets;
    - on a conçu un réseau de sentiers et un système de signalisation des sentiers pour la vallée de la Pembina, et préparé un plan de sentier pour Hecla-Grindstone;
    - on a préparé le plan d'aménagement d'une aire commerciale et d'immeubles à Grand Beach;
    - on a mis en œuvre le plan d'aménagement relatif au grand projet d'amélioration du secteur riverain du lac Falcon, et on a procédé à l'appel d'offres;
    - les initiatives de commercialisation ont compris, entre autres, l'élaboration d'une stratégie de communication exhaustive avec Culture, Patrimoine et Tourisme Manitoba;
    - Le *Provincial Parks Guide* a été refondu, et bon nombre de publications ont été réimprimées.

- Parmi les améliorations apportées aux parcs, mentionnons ce qui suit :

    - on a procédé à l'agrandissement des terrains de camping, à l'ajout de prises d'alimentation et au réaménagement des parcs provinciaux Whiteshell (aux lacs Big Whiteshell et Falcon) et du lac Paint;
    - on a terminé l'aménagement du terrain de camping du lac Clearwater (terrain de camping Pioneer Bay);
    - on poursuit le nivellement, le sablage et l'amélioration du lac situé à Birds Hill;
    - on a amélioré les bâtiments abritant les toilettes dans l'ensemble du réseau;
    - on a terminé le renouvellement de la couche de surface des routes de Grand Beach, qui a compris l'élargissement des pistes cyclables;
    - on a procédé à l'amélioration des systèmes d'approvisionnement en eau au lac Caddy et au lac White, dans le parc provincial de la plage de Saint-Ambroise;
    - on poursuit les programmes d'amélioration de l'accès aux personnes handicapées (modifications apportées aux terrains de camping et aux salles de toilettes);

- on a amélioré et agrandi les sentiers dans l'ensemble du réseau;
- on a construit de nouvelles aires de groupes dans le parc provincial de Saint-Malo.

Forêts

- La Direction des forêts a mis en œuvre la deuxième année d'une entente de trois ans avec Louisiana Pacific Canada Ltd. L'entente consiste à faire l'inventaire des ressources forestières des forêts provinciales de Duck Mountain et des monts Porcupine.

- Un protocole d'entente a été signé avec Forêts Canada dans le but d'établir au Manitoba une série de parcelles permettant de surveiller l'écosystème à long terme. Ces parcelles permettront d'analyser les données relatives à la durabilité des forêts et au changement climatique devant être communiquées à l'échelle provinciale, nationale et internationale.

- Le ministère et l'industrie ont effectué des traitements visant la régénération forestière, y compris des traitements de reprise, sur plus de 9 950 hectares de forêt. La plupart de l'espace a été planté (13,3 millions d'arbres) et on a scarifié le reste des arbres afin de favoriser la régénération naturelle.

- On a effectué une analyse de la régénération sur 11 903 hectares de forêt afin de déterminer s'il y avait bien eu régénération forestière. La Direction des forêts a analysé 4 634 hectares, alors que des spécialistes de la régénération agréés de Tolko ont analysé 1 699 hectares, de Louisiana-Pacific; 1 626 hectares et de Tembec; 3 944 hectares.

- La tordeuse des bourgeons de l'épinette a infesté environ 111 480 hectares de forêt au Manitoba, et les niveaux de défoliation observés étaient généralement faibles ou réduits. Des fonds d'urgence ont été débloqués afin de permettre la pulvérisation d'un insecticide biologique, le Mimic, sur 17 538 hectares de forêt dans la région du lac Athapapuskow (Tolko).

- Au 31 mars 2003, 9 517 ormes avaient été abattus dans 38 communautés ayant conclu une entente de partage des coûts et sept municipalités faisant partie de la zone tampon urbaine. En raison des excellentes conditions de travail durant l'hiver, les équipes ont éliminé l'arriéré (l'abattage est à jour pour la première fois depuis plusieurs années).

- La première phase du UFIS (Urban Forestry Information System) a pris fin en mars 2003. Le UFIS, qui a été conçu par une équipe formée de six étudiants en informatique de gestion de l'Université de Winnipeg, est un système de base de données perfectionné conçu pour surveiller les maladies et les parasites des forêts urbaines. Il servira à surveiller l'analyse et l'abattage des arbres atteints de la maladie hollandaise de l'orme ainsi que le bois d'orme de chauffage dans les communautés manitobaines participant au programme de gestion de cette maladie.

- Grâce au soutien de Conservation Manitoba, de la nation crie Chemawawin et de Tolko Industries Ltd., la Manitoba Solid Wood Division a conclu une entente de partenariat relativement à la gestion et à la récolte des plantes ligneuses dans certaines parties de la zone forestière d'Entre-les-Lacs, qui faisait autrefois partie du secteur sud pour Tolko. L'entente se poursuivra jusqu'en mars 2004. On prévoit d'ici là être en mesure d'évaluer la réussite du partenariat et d'étudier la possibilité de signer une entente à long terme.

- La Province a supprimé la mention « secteur sud » de la zone de licence de gestion forestière de Tolko, conformément aux dispositions de l'entente conclue en décembre 1998 entre Repap et la Province. Les décisions à venir concernant la répartition des ressources forestières et les responsabilités de gestion dans cette zone seront connues après l'analyse de l'approvisionnement en bois de la zone. Entre-temps, à la demande de la Province, la Mountain Quota Holders Association a élaboré un plan d'exploitation triennal et a demandé une licence environnementale afin de poursuivre les opérations forestières existantes.

- Deux directives intitulées *Pre-Harvest Surveys* et *Protection of Softwood Understorey in Mixedwood and Hardwood Forests* ont été publiées et placées sur un nouveau site Web (**http://www.gov.mb.ca/conservation/forestry/forest-practices/practices/fpp-guideline-pdfs.html**), alors qu'on poursuit l'élaboration des guides *Forest Roads* et *Brush Disposal*.

- Trois essais impliquant certaines pratiques forestières ont été menés en 2002, soit un essai d'utilisation flexible visant à écimer les arbres exploités au moment où leur diamètre varie entre trois et quatre pouces dans certaines unités de gestion forestière du nord du Manitoba, et un essai d'ébranchage le long des routes combiné à l'essai d'utilisation flexible.

- La Direction des forêts a travaillé avec Industrie, Commerce et Mines Manitoba pour représenter le Manitoba dans l'enquête du département du Commerce des États-Unis relativement à l'imposition de droits compensateurs sur le bois d'œuvre résineux du Canada. La Direction a répondu aux questionnaires, a coordonné le processus de demande d'exclusion des entreprises et a participé aux discussions bilatérales visant à trouver une solution non contentieuse au différend commercial.

- L'affectation spéciale de Palliser Furniture a été renouvelée pour une période de cinq années supplémentaires. La prolongation comprenait une nouvelle disposition exigeant de Palliser Furniture qu'il établisse des partenariats avec les Premières nations de la région d'Entre-les-Lacs afin que celles-ci l'approvisionnent en bois.

- La Direction des forêts a aussi mené à terme plusieurs projets réalisés conjointement avec Forêts Canada et le Centre de foresterie du Nord, notamment la publication de répertoires des utilisateurs des produits bruts et secondaires du bois, et d'une version à jour du document intitulé *Les forêts du Manitoba*.

Pêches

- Le site Web pour le développement durable des pêcheries, conçu afin d'intégrer ces notions dans le nouveau *Cadre commun des résultats d'apprentissage en sciences, de la maternelle à la 8^e^ année* du Manitoba, demeure un outil novateur et utile pour ce qui est d'intégrer des renseignements sur la pêche dans un programme d'études en sciences offert sur Internet. On a fait la promotion du site lors d'ateliers et de conférences s'adressant aux enseignants, dont l'atelier *Special Areas Group* (sciences). Le travail avec les éducateurs se poursuivra en vue d'élaborer des exercices pour les élèves de secondaire 1 à 4, qui seront incorporés au site à l'automne 2003.

- À la Whiteshell Fish Hatchery, le centre d'accueil en est à sa deuxième année d'exploitation. Des guides-interprètes ont fait visiter les lieux à plus de 4 100 visiteurs de mai à la longue fin de semaine de septembre. Le centre comprend une aire d'attente abritée, des toilettes et des fontaines d'eau potable. Les expositions d'interprétation comprennent, entre autres, des renseignements sur les espèces élevées à l'écloserie, le cycle de vie des poissons, l'utilisation de l'eau, l'histoire de l'écloserie et l'interaction entre les écosystèmes.

- La Direction des pêches a maintenu sa participation au Recreational Fishing Task Group et a coprésidé le National Freshwater Fish Strategy Task Group. Ces groupes, qui rendent compte au Conseil canadien des ministres des Pêches et de l'Aquaculture, élaborent des plans d'action concertés auxquels participent des intervenants et qui ont pour but de maximiser l'efficacité de la gestion. Au nombre d'actions d'importance prévues dans le cadre de la Freshwater Fish Strategy, mentionnons un atelier national consacré à l'élaboration d'un plan d'action.

- Depuis 2002, le Winnipeg's Urban Angling Partnership, qui travaille en collaboration avec City Cats Guiding Service, a offert la possibilité aux résidents de Winnipeg de participer au premier tournoi annuel d'automne de pêche urbaine.

- L'exercice marque la troisième année d'existence d'une ligue de pêche récréative destinée aux jeunes de 9 à 15 ans. Treize équipes composées de six à huit enfants et de deux moniteurs sont allées pêcher une fois par semaine durant six semaines. Des points étaient attribués en fonction de la longueur des prises afin de déterminer le meilleur pêcheur de la ligue. Un site Web a été créé pour permettre aux participants de connaître les résultats et de suivre l'évolution des équipes de la ligue. Parmi les partenaires, mentionnons la Manitoba Wildlife Federation, la Mid-Canada Marine Dealers Association, Pure Fishing (Berkley Canada) et Recreation Connections. On prévoit un programme élargi pour 2003, et la Manitoba Wildlife Federation en sera l'organisme responsable.

- On a terminé la troisième phase du processus d'élaboration de la base de données de la gestion globale des pêcheries. Ce système permettra au personnel d'accéder à des données à jour sur les pêcheries, et ce, de manière efficace. L'élaboration se poursuivra afin que les données restantes provenant des autres bases y soient ajoutées.

- L'initiative de mise en valeur de la pêche, qui en est à sa dixième année, a financé 240 projets visant l'amélioration des populations de poissons et de leur habitat, ainsi que diverses possibilités éducatives. La remise en état continue des rives des cours d'eau par la pose de clôtures, l'aménagement d'un système d'arrosage au-delà du rivage, la construction de passages contrôlés et la remise en végétation se poursuit au niveau de Stoney Creek et du canal de drainage de Brookdale. Dans certaines régions, on a effectué une remise en état localisée afin de démontrer l'efficacité des techniques de bio-ingénierie du sol et l'importance des zones riveraines pour les écosystèmes aquatiques (rivières Birdtail et Boyne). Cette année, les possibilités éducatives qui ont été financées comprenaient l'établissement d'une station aquatique locale au Fort Whyte Center, la mise sur pied d'un programme éducatif sur les pêches offert au North American Wildlife Enforcement Memorial Museum, aux International Peace Gardens et au Sandilands Forest Center à Hadashville, ainsi que la publication d'un document intitulé *The Freshwater Fishes of Manitoba*.

- La Direction des pêches a collaboré avec le Manitoba Arts Network afin de célébrer et de promouvoir le fonds de mise en valeur de la pêche et le concours de timbres annuel.

Protection des espèces naturelles et de l'écosystème

- La vente de trousses de permis de chasse pour les jeunes, qui comprennent des permis pour chasser le cerf et le gibier à plumes sédentaire, continue à augmenter. On en a déjà vendu 3 400.
- On a enregistré un taux de mortalité moyen dans certaines aires de distribution des cerfs en raison des conditions hivernales normales dans la plupart des régions.
- Dans l'ensemble du Manitoba, on a instauré la chasse au gibier d'eau et au gibier à plumes sédentaire le dimanche.
- On a prolongé la saison de chasse aux cerfs à la carabine dans les zones D et E; la saison dure maintenant trois semaines dans toutes les zones.
- Les populations de caribous de la toundra sont stables ou à la hausse, tandis que celles des troupeaux côtiers sont stables.
- La surveillance de la tuberculose bovine (TB) chez les ongulés sauvages de la région du mont Riding s'est poursuivie pour la cinquième année.
- Le nouveau programme de subvention hivernale des castors a permis aux trappeurs de capturer un plus grand nombre de castors et d'enregistrer des bénéfices supplémentaires de l'ordre de 240 000 $.
- Le ministère a signé un contrat relatif à la lutte contre les prédateurs avec la Manitoba Trappers Association afin que ses membres règlent les problèmes que posent les prédateurs pour les éleveurs de bétail.

- Le nombre de diplômés du cours obligatoire de trappeur a été de 250, soit le double de l'année dernière.
- Le comité de surveillance de l'ours noir a élaboré une nouvelle politique relative aux ours noirs qu'il a transmis à la haute direction et au ministre aux fins d'approbation.
- Le Groupe de travail sur les bernaches en milieu urbain a continué d'enquêter sur les problèmes causés par les bernaches à Winnipeg et dans les environs, en mettant l'accent sur la sécurité aéroportuaire.
- Effectuées par des bénévoles depuis 1999, des enquêtes statistiques sur les libellules ont permis d'identifier plus de 1 400 échantillons, y compris neuf nouvelles espèces au Manitoba.
- La base de données informatisées sur la biodiversité du Centre de données sur la conservation du Manitoba (elle comprend plus de 4 000 occurrences d'espèces prioritaires reconnues) a adopté une nouvelle version de Biotics^{MD}. On pourra ainsi représenter plus adéquatement l'emplacement des espèces aux fins de planification de la conservation.
- Des enquêtes sur 25 espèces végétales rares ont permis de produire 30 nouveaux dossiers et de mettre à jour 41 dossiers. Cela comprenait trois nouveaux dossiers sur le Mimule ponctué à feuilles rondes, une espèce prioritaire devant être évaluée par le CSEMDC.
- On a participé de manière continue au projet de Classification nationale de la végétation au Canada, en collaboration avec NatureServe, le gouvernement du Canada et des ONG.
- Une mise à jour de la liste de vérification des araignées de la province, subventionnée par la Section de conservation de la biodiversité, a permis de répertorier 534 espèces que l'on trouve présentement au Manitoba, ce qui constitue une hausse par rapport aux 483 espèces répertoriées en 1992. Les nouvelles espèces comprenaient bon nombre de spécimens qui n'avaient pas pu être identifiés auparavant, et qui étaient conservés au J. B. Wallis Museum de l'Université du Manitoba, ainsi que des espèces nouvellement découvertes durant les collectes sur le terrain.
- On a établi un partenariat avec La Société canadienne pour la conservation de la nature afin d'établir des plans de conservation relatifs au sud-est du Manitoba.
- 225 bénévoles ont analysé 138 routes dans le cadre du projet de surveillance des hiboux de 2002. L'analyse a été élargie de manière importante en 2002, grâce à la participation de Manitoba Hydro et du Delta Marsh Bird Observatory. Les résultats de l'analyse sont affichés à l'adresse suivante (en anglais seulement) www.gov.mb.ca/conservation/wildlife/involved/pdf/owl_survey_2002.pdf.
- Les groupes d'action pour le rétablissement ont axé leur travail sur les oiseaux *en voie de disparition* suivants : pie-grièche migratrice de l'est, pluvier siffleur et faucon pèlerin. Leurs partenaires comprenaient l'Association des éleveurs de bétail du Manitoba, Canards Illimités, Manitoba Hydro, Portage Naturalists, la Ville de Winnipeg, le Programme de conservation et de gérance de l'habitat d'Environnement Canada, et des propriétaires fonciers privés.
- En collaboration avec La Société canadienne pour la conservation de la nature et The Nature Conservancy (États-Unis), on a entrepris l'élaboration d'un plan de conservation des forêts-parcs à trembles du sud-est du Manitoba.
- On a poursuivi la surveillance des caribous des forêts portant des colliers émetteurs dans l'aire de répartition du lac Owl et d'Atikaki-Berens. On a retiré les colliers GPS placés au cou des animaux en 2001-2002 de manière à analyser les données qu'ils contenaient et à installer de nouvelles piles. On a ensuite remis de nouveaux colliers aux caribous.
- Le nombre de projets d'utilisation du sol qui ont fait l'objet d'une étude d'impact sur les habitats fauniques a diminué de moitié par rapport à l'année dernière.
- La surveillance à grande échelle du sol et de la végétation se poursuit aux stations de surveillance permanentes situées près de Thompson. On y évalue les effets à long terme des émissions produites par la fonderie INCO sur les écosystèmes de la forêt boréale.
- On a échantillonné le sol et la végétation aux emplacements du DNARPA (Dispositif national d'alerte rapide pour les pluies acides) de manière à déterminer si les polluants (qui comprennent les particules, les métaux et les pluies acides) ou le changement climatique peuvent affecter la santé des écosystèmes forestiers.
- On a mené une étude sur les métaux lourds dans les jardins privés et les accumulations possibles dans les légumes de jardin à Flin Flon.

- On a effectué une surveillance approfondie des bassins d'eau de surface à Gull Lake Bog afin de déterminer l'impact des changements hydrologiques sur la végétation.
- On a achevé la rédaction du rapport *Metal Concentrations in Surface Soils of Thompson, Manitoba, September 2001,* ainsi que d'un rapport préliminaire sur l'étude des bleuets de Flin Flon.
- On a préparé des rapports relativement aux études *Flin Flon Garden Study* et *Fate of Metals in Thompson Soils*.
- Les projets de la Société protectrice du patrimoine écologique du Manitoba et du programme de gestion de l'habitat des espèces en péril de Conservation Manitoba visant à repérer et à protéger des habitats importants au Manitoba ont reçu un total de 481 500 $.
- Le programme de gestion de la faune comprend l'ajout de terres aux aires de gestion de la faune de Brandon Hills, du lac Proven, de Clematis et du lac Sleeve.
- On a collaboré avec Développement touristique de manière à élaborer et à fabriquer une nouvelle enseigne devant être installée à l'entrée de l'aire de gestion de la faune de Churchill (installée en juin).
- Marais Delta - On a amélioré la visibilité de l'enseigne du marais du patrimoine Delta située sur la R.P.S. 240. Dans le cadre du plan de développement du site, on a établi une aire de mise à l'eau de canots et un sentier pédestre. Le sentier commence près de l'enseigne, longe le canal, et se termine à Cadham Bay.
- Marais d'Oak Hammock – On a entrepris d'améliorer l'infrastructure de la digue afin d'assurer la sécurité du public. On a construit des rampes d'accès pour faciliter l'accès des véhicules marins motorisés du ministère qui s'y rendent à des fins de gestion.
- Canards Illimités Canada a présenté les premiers résultats de son Initiative sur les forêts boréales de l'Ouest (zone du projet Pasquia), soit la classification de la couverture des terres de Pasquia en mars 2003.
- Le projet de lutte contre la salicaire au Manitoba a permis d'élever et de relâcher 18 000 coléoptères dans les marais du Manitoba en 2002 de manière à contrôler la propagation de la salicaire.

Gestion durable des ressources

- La *Loi sur la protection des ours polaires* et la *Loi sur la gestion de la sécurité* ont reçu la sanction royale et ont été édictées. La *Loi sur la qualité de l'eau potable* et la *Loi sur les exploitants d'entreprises touristiques axées sur la nature* ont reçu la sanction royale.

- La Direction de la gestion durable des ressources a participé à la préparation de la Stratégie manitobaine de gestion de l'eau. La stratégie comprend la planification intégrée des eaux et la refonte de diverses lois sur la gestion des eaux, et tente de combler les lacunes et de réduire les écarts dans les dispositions législatives actuelles.

- On a émis environ 1 200 permis à des entreprises touristiques axées sur la nature offrant des services dans des pavillons de chasse, de pêche et d'écotourisme, ainsi que dans des camps éloignés et des pourvoiries.

- La Direction de la gestion durable des ressources, qui a participé à des groupes de travail établis pour mettre en œuvre la *Loi sur le développement durable*, a contribué à l'élaboration :
  - de lignes directrices provisoires servant à guider l'établissement de rapports sur les progrès en matière d'intégration du développement durable dans les activités des ministères;
  - d'un règlement provisoire concernant les lignes directrices sur le développement durable en matière d'approvisionnement et la gestion financière qui régira les municipalités, les divisions scolaires, les offices régionaux de la santé, les collèges et les universités.

- On a également entrepris la rédaction d'un rapport provincial sur la durabilité, et la Direction a participé à l'élaboration du plan d'action sur le développement durable en matière d'approvisionnement de Conservation Manitoba.

- La Direction de la gestion durable des ressources a coordonné le banquet du prix d'excellence pour le développement durable de la Table ronde manitobaine sur le développement durable qui a eu lieu en novembre 2002, et auquel près de 400 personnes ont assisté.

- La Direction de la gestion durable des ressources a continué à coordonner l'importante initiative d'aménagement de la rive est du lac Winnipeg. Au cours de l'exercice, le Cabinet a approuvé la création de la table ronde sur l'aménagement de la rive est du lac Winnipeg, le ministre a approuvé le mandat de la table ronde, un coordonnateur de la liaison avec les collectivités a été engagé, et l'horaire d'une assemblée publique a été établi.

Autorisations environnementales

- Le *Règlement sur les exploitants d'installations de traitement des eaux* a été promulgué. La Direction a collaboré avec le Red River College et d'autres intervenants afin d'élaborer du matériel et des cours de formation à l'intention des exploitants d'installations de traitement des eaux.
- Une importante étude environnementale portant sur l'installation de transformation de pommes de terre Midwest Food Products a été entreprise après que l'on ait soulevé certaines préoccupations relativement aux eaux souterraines.
- La Direction a fait certaines propositions durant les audiences publiques tenues par la Commission de protection de l'environnement et portant sur les stations d'épuration des eaux usées de la Ville de Winnipeg.
- Projets hydroélectriques : Manitoba Hydro a soumis des propositions relatives à la centrale hydroélectrique de Wuskwatim et aux lignes de transport d'énergie connexes. On a préparé et achevé des directives provisoires relatives à l'EIE après que l'on ait mis fin à l'étude gouvernementale et publique et à l'étude publique de la Commission de protection de l'environnement, et que l'on ait recueilli les commentaires du public. Le personnel a préparé un document public présentant brièvement tous les commentaires formulés à l'égard des directives provisoires relatives à l'EIE, et les mesures prises pour revoir les directives, le cas échéant. L'EIE des deux projets a été présenté en avril 2003. Les exigences de l'*Entente Canada-Manitoba d'harmonisation de l'évaluation environnementale* permettront d'assurer la tenue d'une évaluation et d'une révision environnementales exhaustives et approfondies.
- Travaux de protection contre les inondations et projets d'irrigation : On a participé et accordé un soutien technique à plusieurs études portant sur la protection contre les inondations. On a également joué un rôle important en ce qui touche les activités de délivrance provisoire de licences liées au projet de protection contre les inondations de la Ville de Winnipeg. Cette participation s'est poursuivie par une présence au sein des comités fédéraux-provinciaux et des groupes de travail sur la planification et la réglementation de projets d'irrigation.
- Stratégie manitobaine de gestion de l'eau : Le personnel a grandement contribué à l'élaboration de la stratégie manitobaine en jouant un rôle clé au sein de groupes de travail.
- Réglementation sur les pesticides : Santé Canada maintient son *Plan d'action pour les pesticides en milieu urbain*, élaboré en partenariat avec les gouvernements des provinces et des territoires. L'un des objectifs principaux consiste à réduire l'utilisation des pesticides sur les gazons en adoptant les principes de gestion intégrée des pesticides qui mettent l'accent sur la prévention, l'utilisation de produits à risque réduit et le recours aux pesticides seulement en cas de besoin. Par ailleurs, un Groupe de travail sur les critères pour la classification des pesticides a rédigé une *Proposition pour un système harmonisé de classification des pesticides au Canada*, afin d'harmoniser les systèmes de classification provinciaux et fédéraux existants. On a commencé à consulter les intervenants intéressés.
- Virus du Nil occidental : Santé Manitoba a continué de collaborer avec les ministères fédéraux, provinciaux et territoriaux dans le but d'élaborer un plan de gestion des risques exhaustif, coordonné et proactif visant à faire face au virus du Nil occidental.

Sustainable Development Integration

Under The Sustainable Development Act, each department is required to integrate into its annual reporting process information about progress made in incorporating sustainable development into its activities. The section below provides examples of some of the activities the Department has undertaken to incorporate or apply the Principles and Guidelines of Sustainable Development into its everyday operations and activities.

Principles of Sustainable Development

Integration of Environmental (Social, Health) and Economic Decisions

To meet the intent of Principle # 1, the Department would need to ensure:

a) its economic decisions and activities adequately reflect environmental, human health and social effects; and
b) its environmental and health decisions, activities and initiatives adequately take into account economic, human health and social consequences.

Examples:

- The Sustainable Resource Management Branch continued co-ordination of the review and proposed revision of those provincial land use policies for which Manitoba Conservation is the lead department. The approach is to revise the policies to reflect the recommendations of the COSDI report, integrate approved sustainable development land use related policies and integrate the principles of the provincial *Sustainable Development Code of Practice* and ***The Sustainable Development Act.***

Stewardship

To meet the intent of Principle # 2, the Department would need to ensure:

a) its plans, policies and decisions ensure the economy, the environment, human health and social well being are managed for the equal benefit of present and future generations; and
b) its decisions are balanced with tomorrow's effects.

Examples:

- Two Park Reserves were given permanent park status: Caribou River Wilderness Park (representation/protection of enduring features representative of the Northern Transition Forest, includes Round Sand Lake and the Caribou River) and Trappist Monastery Heritage Park (Trappist Monastery ruins, Metis culture, role in development of province and St. Norbert). East Paint Lake and Manigotagan River Park Reserves were extended for a further five years.

Shared Responsibility and Understanding

To meet the intent of Principle # 3, the Department would need to ensure:

a) it takes responsibility for sustaining the economy, the environment, human health and social well-being and be accountable for its decisions and actions in a spirit of partnership and open co-operation with all Manitobans;
b) its decisions and activities reflect Manitoba's shared common economic, physical and social environment;
c) it understands and respects differing economic and social views, values, traditions and aspirations in its decision making and activities; and
d) it considers and reflects in its decisions and activities the aspirations, needs and views of the people of the various geographical and ethnic groups in Manitoba, including aboriginal peoples to facilitate equitable management of Manitoba's common resources.

Examples:

- The Memorandum of Understanding with First Nations regarding the identification, establishment and management of protected areas concluded this year. However, Manitoba remains committed to the MOU and will continue to operate under the guidance of the memorandum while First Nation organizations and government continue to discuss a recommitment to this important document. The First Nations working group, established under the provisions of the MOU, continued to meet this past year to review progress on protected areas discussions with First Nation communities and to provide advise.
- Important work continued this year with the Mining and Forestry industries, First Nation communities, and environmental organizations regarding protected areas. Ongoing work with the Mining Sector continues to identify more lands that could be designated as protected areas. To date 3.9 million ha. of lands have been identified by the Mining Sector for protected land status.
- Manitoba Conservation worked with First Nations and other stakeholders to develop fisheries management approaches that accommodate constitutional obligations and other stakeholder interests. Examples: Dauphin Lake Co-Management Working Group, comprised of members of the West Region Tribal Council and Manitoba Conservation, worked on a plan to ensure the long term sustainability for the Dauphin Lake, and staff continued to work with stakeholders to develop a management approach with Sagkeeng First Nation for Winnipeg River fisheries issues.
- The Sustainable Resource Management Branch co-ordinated consultations with First Nations and northern communities on resource allocations for lodges and outfitters and participated in co-management discussions with Opaskwayak Cree Nation, the West Region Tribal Council and the Manitoba Metis Federation.
- The Transboundary Waters Office represented Manitoba's interests relating to waters crossing the International Boundary. The Office has established a working relationship with Canadian, American and international agencies and officials. The Office works closely with Foreign Affairs and Environment Canada in developing and presenting Canadian positions to the United States.
- The Aboriginal Relations Branch developed, in consultation with Elders, a draft of a policy for the Disposition of Birds of Prey and other Wildlife for Traditional Use by First Nation's People of Manitoba.
- Discussions continued with Sagkeeng First Nation towards the development of a joint sturgeon management plan for the Winnipeg River. The sturgeon monitoring program continued with 246 sturgeon tagged and eggs collected for sturgeon culture.
- The Department continued to participate in the Manitoba Model Forest (MBMF) program. MBMF was created in l992 through a partnership agreement with interested groups looking to support innovative sustainable forest management programs. The focus of the MBMF is to bring forest stakeholders together to work towards a common understanding of ecosystem based processes and sustainable development.

Prevention

To meet the intent of Principle # 4, the Department would need to ensure:

a) its activities and decisions and legislation anticipate, and prevent or mitigate, significant adverse economic, environmental, human health and social effects, and

b) have particular careful regard to its decisions and actions whose impacts are not entirely certain but which, on reasonable and well-informed grounds, appear to pose serious threats to the economy, the environment, human health and social well being.

Examples:

- A review and public consultation of the *Livestock Manure and Mortalities Management Regulation* was completed. A number of significant amendments to the regulation were developed, including dropping the regulatory threshold from 400 to 300 animal units, mandatory monitoring of the source of drinking water for livestock in large operations and certification of commercial manure applicators.
- Studies continued at three sites to examine the potential for groundwater quality impacts from land application of liquid hog manure as a crop fertilizer. Long term monitoring is planned at all three sites.
- A study to determine the effect of climate change on Red River flood magnitudes and frequencies was completed and presented at a National Symposium on hydrology.

- The Red River Floodway was operated from June 18 to 25 and from July 2 to August 4 to reduce the potential of basement flooding within Winnipeg, due to heavy rainstorms and high river levels. In the past, such damages have exceeded $100 million in value. A total of $303,000 was provided in compensation to landowners that experienced damages because of higher water levels.
- Groundwater protection work focused on activities directed towards future flood preparedness, aquifer protection and public awareness of water supply protection, e.g.:
    - private water wells in the Red River Valley Designated Flood Area were inventoried to provide an up-to-date record for producing maps to support an enhanced capability for future flood preparedness;
    - 39 abandoned water wells were sealed to ensure protection of potable groundwater supplies from future flooding events;
    - 35 operational water wells deficient of proper construction or protection were upgraded to flood protection standards to provide a safe source of groundwater and prevent future flood water contamination of both the well and potable groundwater supply;
    - A Fact Sheet was developed to provide public awareness and education material on water supply protection. The publication provides a brief overview of water well basics and outlines good practices for protecting and maintaining a water well. Information on flood protection standards and flood preparedness for water wells located in areas of overland flooding such as the Red River Valley Designated Flood Area was also provided.
- To address concerns with planned introductions of aquatic organisms, the Water Branch began implementing the *National Code on Introductions and Transfers of Aquatic Organisms* and continued to represent Manitoba on the Federal/Provincial/Territorial Task Group working to refine the *Code*. The Branch represented Manitoba on a new Task Group on Aquatic Invasive Species charged with developing a national plan to address the threat of vectors not covered under the *Code*, including the aquarium and aqua-garden trade, live bait, live aquatic food, recreational boating, shipping, and unauthorised introductions and transfers.
- Amendments to ***The Environment Act*** received Royal Assent on May 23, 2002. These provisions relate to measures that may be taken regarding health emergencies caused by disease transmitting mosquitoes.
- Chronic Wasting Disease surveillance was conducted in the white-tailed deer population of the extreme west and the border area adjacent to North Dakota and Minnesota.
- The second year of Bovine TB management plan was implemented around Riding Mountain National Park. Twenty-eight barrier fences were installed around cattle producer hay yards at chronic elk depredation sites. Elk research continued, with 129 elk being captured and monitored to determine movements.
- The ***Drinking Water Safety Act*** received Royal Assent in August of 2002. Work proceeded on the development of regulations under this new Act. The Act will focus on monitoring of water quality, preventing contamination, and identifying potential risks and appropriate water-quality improvements. The Act, when proclaimed will provide the Office of Drinking Water and provincial health officers with a new mandate and responsibility for drinking water quality.
- Review of the private sewage disposal program was completed, and a number of changes were proposed to the *Onsite Wastewater Management Regulation*. Sewage field failures continue to be problematic in districts with heavy clay soils such as the Red River Valley. The new Regulation will improve onsite sewage management, especially in these areas. An Onsite Wastewater Management System Installer's course is facilitated through Red River College.

Conservation and Enhancement

To meet the intent of Principle # 5, the Department would need to ensure:

a) its activities and decisions maintain the ecological processes, biological diversity and life-support systems of the environment;
b) that renewable natural resources are harvested on a sustainable yield basis;
c) that those persons who have been allocated provincial resources make wise and efficient use of them; and
d) its programs and activities enhance the long-term productive capability, quality and capacity of natural ecosystems.

Examples:

- ***The Polar Bear Protection Act*** received Royal Assent on August 1, 2002. This legislation prohibits any person from possessing or exporting a polar bear unless a permit has been obtained from the Minister. It allows regulations to be made respecting instances when a polar bear may be placed in captivity and standards for the care and treatment of polar bears in captivity.
- Two guidelines on *Pre-Harvest Surveys* and *Protection of Softwood Understorey in Mixedwood and Hardwood Forests* were published and placed on a newly established website while work continued on guidebooks related to *Forest Roads* and *Brush Disposal*. These guidelines will link policy, regulations, operations, and inspections.
- The *Lake Winnipeg Action Plan* commits to reducing levels of nitrogen and phosphorus in Lake Winnipeg to concentrations that existed prior to the 1970s. It identifies an initial set of actions to achieve this goal.
- The Fisheries Branch worked toward protection of endangered aquatic species in Manitoba with the Committee On the Status of Endangered Wildlife in Canada (COSEWIC) and the Endangered Species Advisory Committee (ESAC). COSEWIC designated the Manitoba population of rosyface shiner as "threatened", which will afford it special protection under the new Canadian ***Species At Risk Act***. ESAC reviewed four aquatic species and made recommendations to the minister that he designate the rosyface shiner and the northern brook lamprey as "threatened", and the shortjaw cisco as "vulnerable", under Manitoba's ***Endangered Species Act.***
- The Fisheries Branch is leading development of drainage guidelines to meet the needs of the Canada ***Fisheries Act***. The guidelines will ensure all resource interests are accommodated during all phases of waterway maintenance projects where Manitoba, rural municipalities, or conservation districts are proponents. A committee of Fisheries and Oceans Canada biologists and Department staff will create a comprehensive, but simple process to guide all parties through pre-planning, planning, fieldwork and follow-up phases of waterway maintenance. This Committee will also establish design and construction guidelines for maintenance to ensure that pre-alteration ecological functions are sustained.
- The Fisheries Enhancement Initiative funded 240 projects directed at enhancing fish populations and their habitat as well as funding educational opportunities.
- In partnership with the Nischawayshik Cree Nation at Nelson House and Manitoba Hydro, Manitoba Conservation continued to participate in a monitoring study for the Wapisu Caribou Herd.

Rehabilitation and Reclamation

To meet the intent of Principle # 6, the Department would need to ensure:

a) it actively endeavours to repair or have repaired damage to, or degradation of, the environment; and
b) that the Department builds into its future allocations of and plans for the use of resources the requirement to rehabilitate and reclaim areas and resources that may be damaged.

Examples:

- The Department participated in the formulation of the Orphaned Mine Site Program for sites in the Northwest Region (Sherridon/Don Jon Mine/Snow Lake). A TAC Committee has been established to work with consultants to provide direction and receive program reports on the Human Health and Environmental Risk Assessment currently underway on the Sherridon Mine Site.
- One habitat site identified by the Brokenhead Restoration Committee biological study on the Brokenhead River was restored and another site is currently under review.
- A total of fifty-seven water bodies were stocked with 7,750,000 fish (l9,590 brook trout fingerlings, 215,000 brown trout fingerlings, 105,375 lake trout fingerlings, 22,980 rainbow trout fingerlings, 3,000 sparr fingerlings, 16,000 splake fingerlings, 7,367,955 walleye fry and 100 adult perch.

Global Responsibility

To meet the intent of Principle # 7, the Department would need to ensure:

a) it thinks globally when acting locally, recognizing there is economic, ecological and social interdependence among provinces and nation; and

b) it works co-operatively, within Canada and internationally, to integrate economic, environmental, human health and social factors in decision making while developing comprehensive and equitable solutions to problems.

Examples:

- The provincial and federal governments renewed commitment on the Manitoba Lowlands National Park proposal. Possible boundary reconfigurations for the Long Point component of the proposed national park are being developed to achieve greater ecological integrity while recognizing other local and provincial economic development interests. Ongoing contact with First Nations communities and stakeholders was maintained.
- An ***Environment Act*** licence was issued to Manitoba Hydro for the Selkirk Generating Station to phase out the use of coal in favour of using natural gas to reduce air pollution. Considerable effort has been put into the administering licenses for the new Continuous Emission Monitoring systems for the Brandon Generating Station and the Selkirk Generating Station.
- Federal/provincial/territorial negotiations on a formal Memorandum of Understanding for the operation of the National Air Pollution Surveillance (NAPS) program were completed.

Sustainable Development Guidelines

Efficient Uses of Resources

To meet the intent of Guidelines # 1, the Department would need to:

a) encourage and facilitate development and application and use of systems for proper resource pricing, demand management and resource allocation together with incentives to encourage efficient use of resources; and

b) employ full-cost accounting to provide better information for decision-makers.

Examples:

- Manitoba Conservation released, for public discussion, a draft regulation under the ***Waste Reduction and Prevention Act***. Under the proposed Regulation, companies that sell products designated as contributing to the Household Hazardous Waste stream will be given three months to develop plans for an alternative waste management program to keep these wastes out of our environment. The Department worked with industry stakeholders and the public to help ensure costs associated with managing household hazardous wastes become the responsibility of the sellers and manufacturers of these same products. This will promote efficient use of these products and ensure they are properly disposed of.

Public Participation

To meet the intent of Guideline # 2, the Department would need to:

a) use and establish forums which encourage and provide opportunity for consultation and meaningful participation in departmental decision making processes by Manitobans;

b) provide due process, prior notification and appropriate and timely redress for those adversely affected by departmental decisions and actions; and

c) strive to achieve consensus amongst citizens and the department with regard to decisions affecting them.

Examples:

- A Lake Manitoba Regulation Review Committee was established to determine the most acceptable range of regulation for Lake Manitoba and also to consider the best course of action for the water regime along the Fairford River, Lake Pineimuta, Lake St. Martin and the Dauphin River.
- Consultations were initiated regarding the future designations of the Manigotagan and Chitek Lake Park Reserves. Consultations on the proposed South Atikaki Provincial Park and the extension of Amisk Park Reserve were completed.
- Assessment continued on broadening representation on the Lake Winnipegosis Advisory Board to include the full range of fishery interests, including commercial fishing, Aboriginal, and tourism. The Department is working toward establishing a broad stakeholder management board to advise on the management of Lake Winnipegosis.
- The Department released a discussion paper on amendments to ***The Environment Act*** to implement previous Consultation on Sustainable Development Implementation (COSDI) recommendations. Multi-stakeholder consultations on those amendments began in October 2001 and were completed in March 2002. A report summarizing consultation results and recommendations was received in April 2002.
- *The Fish Transportation Loadslip Regulation* was amended to improve information collection, monitoring and allocation of Manitoba's valuable fisheries resources. This has become increasingly difficult in view of recent increases in illegal sales occurring from unlicensed fishing. The amendment requires the completion of a loadslip for all fish transported by any person other than the licensed commercial fisherman who has declared where he will be delivering his fish on his commercial fishing licence (including fish delivered to a packing station).

Access to Information

To meet the intent of Guideline # 3, the Department would need to:

a) improve and refine economic, environmental, human health and social information related to natural resources and the environment; and
b) provide and promote the opportunity for equal and timely access to its information by all Manitobans.

Examples:

- The department completed the second year of the Assiniboine River Study. Information generated will assist to ensure existing and future development along Assiniboine River occurs in a sustainable manner. This work is being co-ordinated with studies being conducted by Cities of Brandon and Portage la Prairie.
- Manitoba Forestry Branch and the Canadian Forest Service, Northern Forest Centre produced *Manitoba's Forests*, a 16 page publication that provides an overview of Manitoba's forests, the forest economy and forest management.
- A Memorandum of Understanding was negotiated with Forestry Canada to establish a series of long term ecosystem monitoring plots to measure Provincial, National & Inter-national reporting requirements related to forest sustainability and climate change. The first phase of the Urban Forestry Information System (UFIS) was completed. UFIS is a sophisticated database system designed to track diseases and pests in urban forests. It will be used for tracking of Dutch Elm Disease (DED) surveys and tree removals and elm firewood in communities participating in the DED management program. The system is able to record the geographical position of each incidence of DED. Spatial data is crucial in tracking and analyzing the spread of DED over time, and will be used for assessing and further refinement of existing strategies to combat this lethal disease of elm trees.
- Negotiations were completed with the Federal National Forest Information System (NFIS) that involves all Provinces and Territories. NFIS will provide an Internet Web-based system wherein the public can find and review databases on Canada's forests and environmental conditions. Information on forest management practices will include harvesting information, reforestation, forest fires, and related biophysical and environmental indicators.
- Work continued on development of a Sustainable Development Website to integrate sustainable development concepts into the new Kindergarten - Senior IV *Science: Manitoba Curriculum Framework of Outcomes*. The site is a Manitoba first in integrating fisheries management information into a science curriculum via the Internet. The site was promoted at teacher workshops and conferences, including the Special Areas Group (Science) workshop. Work will continue with educators to develop exercises for Grades S1 to and Senior IV for implementation in fall 2003.
- Staff continued to participate in Manitoba Envirothon by preparing test questions and assisting in the field day and oral components. Envirothon is an annual Olympic-style academic and environmental program. High school students (Grade 9-12) are tested in four discipline areas (aquatics, forestry, soils, and wildlife) and an annual theme (this year: Agriculture Land Conservation and Preservation). This year the competition is being held at Swan River; 21 Manitoba school teams have entered. The winning team from Manitoba will represent their province at the National Canon Envirothon in Maryland.
- The department continues to lead a government-wide initiative to refine a set of sustainability indicators recommended by the Manitoba Round Table and prepare the Provincial Sustainability Report.

Integrated Decision Making and Planning

To meet the intent of Guideline # 4, the Department would need to:

a) encourage, facilitate, establish and ensure its decision making and planning processes are efficient, timely, accountable and cross-sectoral; and
b) incorporate into its decision making and planning an inter-generational perspective of future needs and consequences.

Examples:

- The Fisheries Branch continued to provide co-ordination and planning assistance for a number of watershed/stream restoration projects in Manitoba. An integrated planning approach joins local stakeholder groups and agencies in restoring the health and functions of watersheds. Project work includes in-depth aerial and ground truthing surveys to determine land use practises and natural functions impacting the health of the watershed. Site specific project sites are also identified which require mitigation work to protect and enhance valuable watershed components such as water quality and fish and wildlife habitat. Initiatives continued on the Brokenhead, Valley, and Upper Whitemud Rivers, and selective tributaries on the east side of Lake Manitoba (north basin). New planning initiatives are being implemented on the Black, Seine, and Boyne rivers as well as a number of selected tributaries on the west side of Lake Manitoba (the Narrows area).
- The department co-ordinated an interdepartmental process to work on implementation strategies for *Water: A Proposed Strategic Plan for Manitoba*, including issue-specific provincial strategies, watershed management planning, legislative framework and financial underpinnings. The strategy will lead to comprehensive water legislation and locally driven water management and planning, based on watershed boundaries.

Waste Minimization and Substitution

To meet the intent of Guideline # 5, the Department would need to:
a) encourage and promote, within and outside of the Department, the development and use of substitutes for scarce resources where such substitutes are both environmentally sound and economically viable; and
b) reduce, reuse, recycle and recover the products the Department uses in its daily operations and encourage, promote and facilitate the 4 Rs in society generally.

Examples:

- Contract Management Section continued to provide advice and support to Departmental Staff regarding contractual obligations. The Section is also promoting the use of "green" materials in its day to day operations by using recycled paper, toner, etc., along with producing two sided reports and recycling all superfluous paper. The Section is also going to incorporate the use of "green" materials/products in all tender documents, which will result in obtaining "greener" services /products and waste disposal practices from contractors.
- The Air Quality Section continued to participate in an office vehicle pooled usage program by sharing its vehicle with other users. Staff continued to use alternate transportation methods to attend meetings such as walking, use of Winnipeg Transit, carpooling, etc.
- Interlake Region continued to work with municipalities on solid waste management, fostering closure of unacceptable waste disposal sites and developing proper sites or converting to waste transfer stations. Staff continued to work toward the closure of the last of the liquid waste pits in the region with construction of engineered sewage lagoons or other treatment facilities to properly treat sewage wastes.
- Manitoba Conservation chaired and participated on the Northern Waste Committee (NWC) to assist in addressing solid waste management in the North. NWC comprises stakeholder groups and was created in response to the *Final Report of the Manitoba Regional Waste Management Task Force: Action Plan and Recommendations* (December 1999). The Committee examined issues and obstacles that hinder regionalized waste management planning. An interim report has been drafted and stakeholder consultations are planned for the fall of 2003.

Research and Innovation

To meet the intent of Guideline # 6, a Department would need to:
a) encourage and assist in the research, development, application and sharing of knowledge and technologies which further economic, environmental, human health and social well-being.

Examples:

- The Ecosystems Based Management (EBM) Pilot Project in the Lac Seul Upland ecoregion on the east of Lake Winnipeg was completed with release of the *Science Team Final Report* and the *Executive Summary*. Three reports were released earlier: *Socioeconomic Study*, *Land Use Studies*, and *Values Team Final Report*. The significant information/databases generated should be of great benefit for planning east of Lake Winnipeg.
- The Department participated in a Sustainability Indicators project under Canada/South Africa Twinning Program. It is assisting the Northwest Province of South Africa in designing a process for development and reporting on sustainability indicators for their province.
- Due to public concerns on air emissions, a *Flin Flon Garden Study* was initiated and completed. The purpose of the study was to determine levels of heavy metals in garden vegetables and in the soil in Flin Flon and assess the associated health and environmental risks.

Sustainable Development Procurement Goals

Education, Training, and Awareness

To meet the intent of Goal #1, a department would need to ensure a culture that supports sustainable procurement practices exists within their department by:
(a) increasing awareness about the benefits of Sustainable Development Procurement among departments, employees and vendors; and
(b) expanding the knowledge and skills of procurement practitioners and end users.

Examples:

- The Department began preparing a procurement education and training needs assessment.
- The Department began to prepare a web site to upgrade and build web-based procurement tools and checklists for staff use.
- A "general statement" regarding individual employee roles and responsibilities respecting Sustainable Procurement was drafted that will be communicated to all employees via Managers and will be incorporated into all new/revised position descriptions.
- The Department began to adjust manuals and procedures to reflect sustainable development procurement guidelines, such as the Department's Contract Manual.
- The department began to convey to all staff involved in procurement to ensure sustainability is noted with respect to all purchase requisitions submitted to PSB.

Pollution Prevention and Human Health Protection

To meet the intent of Goal #2, a department would need to protect the health and environment of Manitobans from possible adverse effects of their operations and activities, and provide a safe and healthy working environment by:
(a) reducing their purchase and use of toxic substances; and
(b) reducing solid waste sent to landfill from Government of Manitoba owned or leased facilities occupied by the department.

Examples:

- The Department began preparing environmentally preferable product and services checklists in conjunction with a sustainable development procurement website.
- The Department initiated amendments to janitorial contracts in order to reduce toxic substance use and replace with environmentally friendly products.
- The Department prepared a draft standard for minimum requirements for waste management and recycling for all Conservation owned buildings and facilities.
- The Deputy Minister of Conservation obtained a commitment from Transportation and Government Services to develop a comprehensive recycling/waste stream management program for government.
- The Department moved to ensure all departmental tender/RFP documents include the requirement for sustainable waste management, as well as all departmental requisitions when transmitted to Procurement Services Branch of Transportation and Government Services.
- The Department also began developing a standard for office equipment, paper purchase and use. Corporate Services Division and the Pollution Prevention Branch, Programs Divisions piloted the use of 100% post-consumer recycled paper in the Department with the view to expand its use Department wide by the end of fiscal year 2003/04.

Reduction of Fossil Fuel Emissions

To meet the intent of Goal #3, a department would need to reduce fossil fuel emissions of their operations and activities by:

(a) reducing both consumption and emissions of vehicle fuels; and
(b) as a substitute for regular fuels, increase their use of ethanol-blended fuels and alternative energy sources.

Examples:

- The Department of Transportation and Government Services, and the Manitoba Procurement Council consulted with Manitoba's FLEET Vehicles Agency that resulted in the hiring of an Environmental Analyst to conduct vehicle analysis that considers sustainability.
- Ethanol fuel usage reports are now being generated by FLEET and reviewed within Manitoba Conservation, as well as alternative fuel vehicles being included on the FLEET replacement list.
- The Deputy Minister of Conservation sent instructions to all Cohservation staff in March 2002 to purchase ethanol-blended fuel where reasonably available.
- A map identifying the stations that provide ethanol in relation to the department's government vehicle fleet was produced and distributed for reference of managers and drivers.

Resource Conservation

To meet the intent of Goal #4, a department would need to reduce their use and consumption of resources in a sustainable and environmentally preferable manner by:
(a) reduce the total annual consumption of utilities including natural gas, electricity, propane, fuel oil and water in all leased or owned Government of Manitoba buildings and premises occupied by the department; and
(b) within the context of reduced resource use, increase the proportion of environmentally preferable products and environmentally preferable services used by the department.

Examples:

- The department prepared a listing of all Conservation owned buildings to compile baseline utility use to begin work on conducting audits, developing realistic minimum requirements and undertaking retrofits.
- Manitoba Hydro's Power Smart and C2000 information were obtained and water-efficiency standards, as well as utility-efficiency and environmentally friendly office checklists were drafted.
- Standard clauses for SD Procurement were also incorporated into the department's Contract Manual and made a requirement of all purchase requisitions transmitted to Procurement Services Branch of Transportation and Government Services.

Community Economic Development

To meet the intent of Goal #5, a department would need to ensure that their procurement practices foster and sustain community economic development by:
(a) increasing the participation of Aboriginal peoples and suppliers in providing for the department's goods and services needs;
(b) assisting in the development and growth of local environmental industries and markets for environmentally preferable products and services; and
(c) increasing the participation of small businesses, community based businesses and Co-ops in the department's procurement opportunities.

Examples:

- The department began conducting Aboriginal Procurement Initiative information sessions with Branches.
- The department initiated discussions through the Manitoba Procurement Council with Industry Trade and Mines, and Intergovernmental Affairs respecting corporate responsibilities for environmental industries, small and CED businesses and Co-ops.

Government-wide Implementation of Sustainable Development

The Sustainable Development Act, proclaimed July 1, 1998 mandates all government departments to incorporate sustainable development practices into their activities. The Act creates a framework through which sustainable development will be implemented in the public sector. The Manitoba government is not only required to fulfil the obligation of promoting sustainability within its operations, it must also report annually on the progress made in this effort. In this way, the public can review updates on how departments are progressing toward sustainability. All Manitobans can play a part in our drive to achieve the goals set out in ***The Sustainable Development Act***, and with the information provided to them on an annual basis, government's progress can be easily monitored.

There are specific requirements under the Act which require implementation over time through a co-operative effort across the Manitoba government, utilizing working groups of staff under the direction of a steering committee of senior officials, ultimately reporting to Cabinet. Manitoba Conservation is the lead department in this exercise, coordinating the government-wide effort to ensure sustainability is a fundamental element of our activities. As part of the responsibility of being the lead department, Manitoba Conservation must track the progress being achieved on a provincial scale.

The following is a summary and progress report on the implementation of the requirements of ***The Sustainable Development Act*** by the Manitoba government:

Provincial Sustainable Development Code of Practice:

- The Provincial Sustainable Development Code of Practice was adopted by Cabinet in July 2001.
- Workplans have been developed to elaborate on the code of practice and guide the annual reporting of departmental progress, including implementing relevant recommendations from the *Report of the Manitoba Climate Change Task Force*.
- Communication plans are being developed to enhance public sector understanding of the code and its implementation.
- A tracking system is being developed to help oversee and monitor the implementation of the code of practice and report on successes and weakness in implementation.
- Guidelines for incorporating sustainable development activities into annual reports have been prepared and departments will provide an inventory of activities relating to sustainability including implementation of a code of practice.
- Each government department is participating in a process to address compliance with the code of practice, and reporting relevant activities.

Financial Management Guidelines:

- The Provincial Sustainable Development Financial Management Guidelines were adopted by Cabinet in July 2001.
- Workplans have been developed to ensure the integration of the provincial financial management guidelines and the relevant recommendations from the *Report of the Manitoba Climate Change Task Force* into manuals and procedures.
- Sustainability information is to be integrated into a Sustainability Impact Assessment that will accompany Cabinet and Treasury Board materials for consideration.
- Communication plans are being developed to enhance public sector understanding of the guidelines and their implementation.
- A monitoring and tracking system is being developed to accompany the Sustainability Impact Assessment tool and enhance financial management across government.
- Guidelines for incorporating sustainable development activities into annual reports have been prepared and departments will provide an inventory of activities relating to sustainability including implementation of the guidelines.
- A consistent method of reporting progress across government is being developed.

Sustainability Guidelines Regulations for Local Governments, School Divisions, Universities, Colleges and Regional Health Authorities:

- A regulation on sustainable development financial management and procurement guidelines for local authorities, school divisions, colleges, universities, and regional health authorities has been developed through stakeholder consultations. Development of this regulation is a requirement of the Act.
- Monitoring and implementation of the requirements of the regulation are being developed focussing initially on education and communication.

Sustainability Indicators and Reporting:

- The Act requires preparation of a provincial Sustainability Report by 2005 and subsequent reports every five years thereafter.
- The Manitoba government is acting on the recommendations of the Manitoba Round Table regarding sustainability indicators, and is in the process of compiling data and information into a draft report to go out for public review.
- All government departments are participating actively in the process.

Sustainable Development Procurement Goals and Organizational Action Plans:

- Sustainable Development Procurement goals were adopted by Cabinet in May, 2002.
- All departments have provided Sustainable Development Procurement Action Plans to the Manitoba Procurement Council outlining progress in adjusting purchasing behaviour towards products and services that minimize adverse impacts on the environment, economy, human health, and well-being.
- A preliminary Environmentally Preferable Products List has been established to assist departments in the evaluation of products and services and allow for improved purchasing choices.

Intégration du développement durable

En vertu de la *Loi sur le développement durable*, chaque ministère est tenu de faire état, dans son rapport annuel, des progrès accomplis sur le plan de l'intégration du développement durable dans ses activités. Voici quelques exemples de ce que le ministère a fait pour intégrer ou utiliser de nombreux principes et directives en matière de développement durable dans ses activités quotidiennes.

Principes en matière de développement durable

Intégration des décisions environnementales (conséquences sociales et effets sur la santé) et économiques

Pour respecter le dessein du premier principe, le ministère doit s'assurer de ce qui suit :

a) que ses décisions et activités économiques tiennent compte comme il se doit des conséquences sociales et environnementales et des effets sur la santé humaine;

b) que ses décisions, activités et initiatives en matière d'environnement et de santé tiennent compte comme il se doit des conséquences sociales et économiques, et des effets sur la santé humaine.

Exemples :

- La Direction de la gestion durable des ressources a continué de coordonner l'étude et la révision des politiques provinciales en matière d'utilisation des terres dont est chargé Conservation Manitoba. Cette démarche consiste à modifier les politiques de sorte qu'elles reflètent les recommandations du rapport de la COSDI, à intégrer les politiques approuvées sur l'aménagement durable des terres connexes, et à intégrer les principes du *Code de pratique provincial du développement durable* et de la ***Loi sur le développement durable***.

Gérance de l'environnement

Pour respecter le dessein du second principe, le ministère doit s'assurer de ce qui suit :

a) que ses plans, politiques et décisions tiennent compte du bien-être économique, environnemental et social ainsi que de la santé humaine, et qu'ils bénéficient autant aux générations actuelles qu'aux générations à venir;

b) que ses décisions tiennent compte des conséquences à venir.

Exemples :

- Deux réserves de parc ont reçu la désignation de parcs permanents : Le parc sauvage de la Rivière-Caribou (protection des éléments durables qui représentent bien la forêt de transition du nord, notamment les lacs Round et Sand et la rivière Caribou) et le parc du patrimoine du Monastère-des-trappistes (ruines du Monastère des trappistes, culture métisse et rôle dans le développement de la province et de Saint-Norbert). Les réserves de parcs du Lac-Paint-Est et de la Rivière-Manigotagan seront maintenues pour une période supplémentaire de cinq ans.

Responsabilité partagée et vision commune

Pour respecter le dessein du troisième principe, le ministère doit s'assurer de ce qui suit :

a) qu'il s'engage à assurer le bien-être économique, environnemental et social ainsi qu'à protéger la santé humaine, et qu'il rende compte de ses décisions et de ses activités dans un esprit de partenariat et de grande coopération avec toute la population manitobaine;

b) que ses décisions et activités tiennent compte comme il se doit de l'environnement économique, physique et social commun du Manitoba;

c) que ses décisions et activités tiennent compte des différentes opinions, valeurs, traditions et aspirations économiques et sociales;

d) que ses décisions et activités reflètent les aspirations, les besoins et les opinions des gens des diverses régions et des différents groupes ethniques du Manitoba, y compris des Autochtones, de manière à assurer une gestion équitable des ressources communes du Manitoba.

Exemples :

- Un protocole d'entente (PE) avec les Premières nations concernant le repérage, l'établissement et la gestion de zones protégées a été conclu cette année. Le Manitoba souscrit pleinement au PE et continuera à orienter ses activités en fonction du protocole, alors que les organisations des Premières nations et le gouvernement poursuivront les discussions sur le renouvellement de leur engagement envers cet important document. Le groupe de travail des Premières nations, constitué en vertu des dispositions du PE, a poursuivi ses rencontres l'année dernière dans le but d'examiner l'avancement des discussions sur les zones protégées avec les communautés des Premières nations, et de fournir des conseils.
- Cette année, on a continué de mener des travaux d'envergure sur les zones protégées avec les industries minières et forestières, des communautés des Premières nations et des organismes environnementaux. Un travail continu avec le secteur minier a permis de repérer bon nombre de terres susceptibles d'être désignées comme zones protégées. Jusqu'à maintenant, 3,9 millions d'hectares de terres susceptibles d'être protégées ont été repérées par le secteur minier.
- Conservation Manitoba a collaboré avec les Premières nations et d'autres intervenants dans le but d'élaborer des méthodes de gestion des pêches qui tiennent compte des obligations constitutionnelles et des intérêts des intervenants. Par exemple, le groupe de travail sur la cogestion du lac Dauphin, qui comprenait des membres du West Region Tribal Council et des représentants de Conservation Manitoba, a travaillé à l'élaboration d'un plan visant à assurer la durabilité à long terme du lac Dauphin, et le personnel a continué de collaborer avec les intervenants dans le but d'établir une méthode de gestion des pêches avec la Première nation Sagkeeng relativement à la rivière Winnipeg.
- La Direction de la gestion durable des ressources a coordonné les consultations auprès des communautés des Premières nations et du Nord portant sur l'attribution de ressources aux pavillons et pourvoiries, et a participé aux discussions relatives à la cogestion avec la nation crie d'Opaskwayak, le West Region Tribal Council et la Manitoba Metis Federation.
- Le Bureau des eaux transfrontalières a représenté les intérêts du Manitoba en ce qui touche les eaux transfrontalières. Le bureau a établi des relations de travail avec les organismes et les fonctionnaires canadiens, américains et internationaux. Le bureau travaille en étroite collaboration avec les ministères des Affaires étrangères et de l'Environnement du Canada dans le but d'établir la position du Canada et de la présenter aux États-Unis.
- La Direction des relations avec les Autochtones a élaboré, en collaboration avec les aînés, une politique provisoire sur la cession, à des fins d'utilisation traditionnelle, des oiseaux de proie et des autres animaux sauvages aux Premières nations du Manitoba.
- On a poursuivi les discussions avec la Première nation Sagkeeng afin d'établir un plan de cogestion de l'esturgeon dans la rivière Winnipeg. Le programme de surveillance de l'esturgeon s'est poursuivi. On a marqué 246 esturgeons et recueilli des oeufs des acipenséricultures.
- Le ministère a maintenu sa participation au programme de forêt modèle du Manitoba (FMM). La FMM a été créée en 1992 par suite d'une entente de partenariat avec des groupes intéressés cherchant à soutenir des programmes novateurs de gestion durable des forêts. La FMM vise à regrouper les parties intéressées du milieu forestier afin qu'elles en viennent à avoir une vision commune des processus écosystémiques et du développement durable.

Prévention

Pour respecter le dessein du quatrième principe, le ministère doit s'assurer de ce qui suit :

a) que ses activités, décisions et dispositions législatives prévoient, empêchent ou limitent les effets économiques, environnementaux et sociaux défavorables ou les effets néfastes sur la santé humaine;

b) qu'il porte une attention toute particulière à ses décisions ou actions dont les effets demeurent quelque peu incertains mais qui, selon des motifs raisonnables, pourraient constituer une menace grave au bien-être économique, environnemental et social et à la santé humaine.

Exemples :

- On a terminé la révision du *Règlement sur la gestion des animaux morts et des déjections du bétail* et la consultation publique sur cette question. On a préparé une série d'importantes modifications au règlement, notamment la réduction du seuil réglementaire de 400 à 300 unités animales, la surveillance obligatoire de toute source d'eau potable destinée au bétail dans les grandes exploitations, et la certification des applicateurs professionnels de déjections.
- On a poursuivi des études sur trois emplacements dans le but d'examiner les impacts potentiels sur la qualité de l'eau souterraine de l'épandage de lisier liquide sur le sol en guise d'engrais. On prévoit effectuer une surveillance à long terme sur ces trois emplacements.
- On a achevé une étude visant à déterminer les effets du changement climatique sur l'importance et la fréquence des crues de la rivière Rouge. Cette étude a été présentée à un colloque national sur l'hydrologie.
- Le canal de dérivation de la rivière Rouge a été mis en exploitation du 18 au 25 juin ainsi que du 2 juillet au 4 août afin de réduire les risques d'inondations de sous-sol à Winnipeg qu'auraient pu provoquer les pluies abondantes et les niveaux élevés des rivières. Par le passé, les dommages causés par de telles inondations ont dépassé les 100 millions de dollars. On a remis 303 000 $ en guise de dédommagement aux propriétaires fonciers qui ont subi des dommages en raison des niveaux d'eau élevés.
- Les travaux de protection de l'eau souterraine s'articulaient autour d'activités de préparation aux éventuelles inondations, de protection des aquifères et de sensibilisation du public à la protection de l'approvisionnement en eau :
  - on a dénombré les puits artésiens privés dans la zone d'inondation désignée de la vallée de la rivière Rouge de manière à obtenir un registre à jour. Ce registre servira à créer des cartes qui permettront de mieux se préparer contre les éventuelles inondations;
  - on a condamné 39 puits abandonnés afin de protéger les approvisionnements en eau potable souterraine contre les éventuelles inondations;
  - on a réparé 35 puits artésiens en exploitation mal construits ou mal protégés afin qu'ils répondent aux normes de protection contre les inondations, et ce, de manière à protéger la source d'eau souterraine et à prévenir l'éventuelle contamination par suite d'inondations de l'approvisionnement en eau de puits et en eau potable souterraine;
  - on a élaboré une feuille de renseignements dans le but de sensibiliser le public à la protection de l'approvisionnement en eau. Cette publication fait un survol des notions élémentaires sur les puits artésiens, et décrit brièvement les bonnes pratiques en matière de protection et d'entretien de tels puits. On a également fourni des renseignements sur les normes en matière de protection contre les inondations et sur la préparation contre les inondations des puits artésiens situés dans des zones d'inondation comme la zone d'inondation désignée de la vallée de la rivière Rouge.
- Pour régler les problèmes posés par l'introduction planifiée d'organismes aquatiques, la Direction des eaux a entrepris la mise en œuvre du *Code national sur l'introduction et le transfert d'organismes aquatiques* et a continué à représenter le Manitoba au sein du groupe de travail fédéral-provincial-territorial chargé de peaufiner le *Code*. La Direction a représenté le Manitoba au sein d'un nouveau groupe de travail sur les espèces aquatiques envahissantes responsable de l'élaboration d'un plan national visant à parer à la menace que peuvent poser certains vecteurs dont il n'est pas fait mention dans le *Code*, comme le commerce des animaux d'aquarium et de jardins aquatiques, les appâts vivants, les animaux aquatiques vivants destinés à l'alimentation, la navigation de plaisance, l'expédition et les introductions et transferts non autorisés.
- Les modifications à la ***Loi sur l'environnement*** ont reçu la sanction royale le 23 mai 2002. Ces dispositions se rapportent aux mesures qui peuvent être prises en cas d'interventions sanitaires d'urgence provoquées par des moustiques porteurs de maladies.
- On a effectué la surveillance de l'encéphalopathie des cervidés parmi la population de cerfs de Virginie vivant à l'extrême ouest et dans la région frontalière voisine du Dakota du Nord et du Minnesota.
- On a entrepris la deuxième année du programme de gestion de la tuberculose bovine dans le parc national du Mont-Riding. On a clôturé vingt-huit champs où les éleveurs de bétail conservent leur foin dans les zones où les cerfs ont causé des dommages. On poursuit la

surveillance des cerfs; 129 d'entre eux ont déjà été capturés et on surveille leurs déplacements.

- La ***Loi sur la qualité de l'eau potable*** a reçu la sanction royale en août 2002. On a poursuivi le travail d'élaboration de règlements afférents à cette nouvelle loi. La *Loi* sera axée sur la surveillance de la qualité de l'eau, la prévention de la contamination, le repérage des risques potentiels et l'identification des améliorations devant être apportées à la qualité de l'eau. Lorsqu'elle sera proclamée, la *Loi* donnera un nouveau mandat et de nouvelles responsabilités en matière de qualité de l'eau potable à l'Office de l'eau potable et aux agents de protection de la santé provinciaux.
- On a terminé la révision du programme d'installation de systèmes privés d'évacuation des eaux usées, et on a proposé une série de changements au *Règlement sur les systèmes de gestion autonomes d'eaux résiduaires.* Les ratés des champs d'épandage demeurent problématiques dans les districts où les sols sont très argileux, comme dans la vallée de la rivière Rouge. Le nouveau règlement permettra d'améliorer le traitement individuel des eaux usées, en particulier dans ces zones. Un cours d'installateur de systèmes de traitement individuel des eaux usées est offert au Red River College.

Conservation et mise en valeur

Pour respecter le dessein du cinquième principe, le ministère doit s'assurer de ce qui suit :

a) que ses activités et décisions soient favorables aux processus écologiques, à la diversité biologique et aux milieux vitaux de l'environnement;
b) que les ressources naturelles renouvelables soient exploitées selon les principes d'un rendement équilibré;
c) que les personnes à qui l'on a attribué des ressources naturelles les exploitent à bon escient;
d) que ses programmes et activités soient favorables à long terme à la capacité de production, à la qualité et à la capacité des écosystèmes.

Exemples :

- La ***Loi sur la protection des ours polaires*** a reçu la sanction royale le 1^er^ août 2002. Cette loi interdit à quiconque de posséder ou d'exporter un ours polaire à moins d'avoir obtenu un permis du ministre l'y autorisant. Elle laisse place à l'élaboration de règlements visant les cas où un ours polaire peut être gardé en captivité, et les normes relatives aux soins et au traitement des ours polaires en captivité.
- Deux directives intitulées *Pre-Harvest Surveys* et *Protection of Softwood Understorey in Mixedwood and Hardwood Forests* ont été publiées et placées sur un nouveau site Web, alors qu'on poursuit l'élaboration des guides *Forest Roads* et *Brush Disposal*. Ces directives réuniront des politiques, des règlements, des activités et des inspections.
- Le *Plan d'action pour le lac Winnipeg* vise à réduire les concentrations d'azote et de phosphore dans le lac Winnipeg à ce qu'elles étaient avant 1970. Le plan précise une première série d'actions devant être menées pour atteindre cet objectif.
- La Direction des pêches a travaillé avec le Comité sur le statut des espèces menacées de disparition au Canada (CSEMDC) et avec le Comité consultatif sur les espèces en voie de disparition dans le but de protéger les espèces aquatiques en voie de disparition au Manitoba. Le CSEMDC a désigné la population de têtes roses du Manitoba comme « espèce en voie de disparition »; celle-ci sera donc protégée par la nouvelle ***Loi sur les espèces en péril*** (Canada). Le Comité consultatif sur les espèces en voie de disparition a étudié quatre espèces aquatiques et formulé des recommandations au ministre quant à la désignation de la tête rose et de la lamproie du nord comme « espèces en voie de disparition », et du cisco à mâchoires égales comme « espèce vulnérable » en vertu de la ***Loi sur les espèces en voie de disparition*** (Manitoba).
- La Direction des pêches dirige l'élaboration de directives sur le drainage afin de répondre aux exigences de la ***Loi sur les pêches*** (Canada). Ces directives feront en sorte qu'on tiendra compte de tous les besoins en matière de ressources durant chaque phase des projets d'entretien des voies d'eau dont le Manitoba, les municipalités rurales ou les districts de conservation sont les promoteurs. Un comité composé de biologistes de Pêches et Océans Canada et du personnel du ministère élaborera un processus exhaustif mais simple pour aider toutes les parties durant les phases de planification préliminaire, de planification, de travail sur le terrain et de suivi des

projets d'entretien des voies d'eau. Ce comité établira également des directives en matière de conception et de construction dans le but d'assurer la durabilité des fonctions écologiques qui existaient avant les changements.

- L'initiative de mise en valeur de la pêche a financé 240 projets visant à améliorer les populations de poissons et leur habitat, ainsi qu'à subventionner des possibilités éducatives.
- En collaboration avec la nation crie Nisichawayasihk de Nelson House et Manitoba Hydro, Conservation Manitoba a continué de participer à une étude visant à surveiller le troupeau de caribou Wapisu.

Remise en valeur et assainissement

Pour respecter le dessein du sixième principe, le ministère doit s'assurer de ce qui suit :

a) qu'il s'emploie activement à réparer ou à faire réparer les dommages causés à l'environnement, ou à résoudre les problèmes de dégradation environnementale;

b) que le ministère intègre l'obligation de remettre en valeur et d'assainir les régions et les ressources endommagées à ses futurs plans d'utilisation des ressources et affectations de ressources.

Exemples :

- Le ministère a participé à l'élaboration du programme relatif aux mines abandonnées se rapportant aux mines de la région du Nord-Ouest (mines de Sherridon, Don Jon et Snow Lake). Un CCT a été formé pour travailler avec des conseillers afin de formuler des directives et de recevoir des rapports sur l'évaluation des risques pour la santé et l'environnement qui se déroule présentement à la mine de Sherridon.
- On a remis en état un habitat repéré dans le cadre de l'étude biologique du Brokenhead Restoration Committee sur la rivière Brokenhead, et un autre site est présentement à l'étude.
- Un total de cinquante-sept plans d'eau ont été ensemencés de 7 750 000 poissons (19 590 alevins d'omble de fontaine, 215 000 alevins de truite de mer, 105 375 alevins de touladi, 22 980 alevins de truite arc-en-ciel, 3 000 alevins de sparr, 16 000 alevins de wendigo, 7 367 955 alevins de doré jaune et 100 perches adultes).

Responsabilité globale

Pour respecter le dessein du septième principe, le ministère doit s'assurer de ce qui suit :

a) qu'il pense globalement quand il agit localement, qu'il reconnaisse l'interdépendance économique, écologique et sociale entre les provinces et les pays;

b) qu'il travaille en collaboration, au sein du Canada et à l'échelon international, pour intégrer les facteurs économiques, environnementaux et sociaux et relatifs à la santé humaine dans la prise de décision, tout en trouvant des solutions globales et équitables à ces problèmes.

Exemples :

- Les gouvernements fédéral et provincial ont renouvelé leur engagement envers la création d'un parc national des basses terres du Manitoba. On prépare l'éventuelle reconfiguration des limites de la composante de Long Point du projet de parc national afin d'obtenir une meilleure intégrité écologique, tout en tenant compte des autres intérêts locaux et provinciaux en matière de développement économique. On a maintenu un contact continu avec les communautés des Premières nations et les intervenants.
- Une licence délivrée en application de la ***Loi sur l'environnement*** a été remise à Manitoba Hydro afin qu'il puisse abandonner progressivement l'utilisation du charbon à la centrale de Selkirk au profit du gaz naturel, et ce, afin de réduire la pollution atmosphérique. On a beaucoup travaillé à l'administration des licences relatives aux nouveaux systèmes de mesure à l'émission continue des centrales de Brandon et de Selkirk.
- On a mis fin aux négociations fédérales-provinciales-territoriales concernant l'élaboration d'un protocole d'entente officiel sur les activités du Réseau national de surveillance de la pollution atmosphérique (RNSPA).

DIRECTIVES EN MATIÈRE DE DÉVELOPPEMENT DURABLE

Utilisation efficace des ressources

Pour respecter le dessein de la première directive, le ministère doit s'assurer de ce qui suit :

a) qu'il encourage et facilite le développement, l'application et l'utilisation des systèmes pour permettre une tarification appropriée des ressources, une bonne gestion de la demande et une répartition adéquate des ressources, ainsi que pour offrir des incitatifs à l'exploitation efficace des ressources;

b) qu'il applique la méthode comptable du coût complet pour mieux informer les décideurs.

Exemples :

- Conservation Manitoba a publié, aux fins de débat public, un règlement provisoire établi en application de la ***Loi sur la réduction du volume et de la production des déchets***. Au titre du règlement proposé, les entreprises qui vendent des produits désignés comme contribuant au flux des déchets ménagers dangereux se verront accorder trois mois pour élaborer un plan de gestion des déchets de remplacement visant à garder ces déchets hors de notre environnement. Le ministère a travaillé avec les membres de l'industrie et avec le public afin que les coûts associés à la gestion des déchets ménagers dangereux relèvent des vendeurs et des fabricants de ces produits. Cela contribuera à promouvoir une utilisation efficace de ces produits et à faire en sorte qu'ils soient éliminés adéquatement.

Participation du public

Pour respecter le dessein de la seconde directive, le ministère doit s'assurer de ce qui suit :

a) qu'il utilise et crée des forums offrant aux Manitobains des occasions de consultation et de participation significative aux mécanismes décisionnels ministériels;

b) qu'il offre en temps opportun des procédures établies, des avis préalables et des mesures réparatrices appropriées aux personnes sur lesquelles les décisions et mesures ministérielles ont des effets néfastes;

c) qu'il s'efforce d'établir un consensus parmi la population et le ministère en ce qui a trait aux décisions qui les touchent.

Exemples :

- On a formé un conseil consultatif de révision des règlements relatifs au lac Manitoba afin de déterminer l'éventail le plus pertinent de règlements relatifs au lac Winnipeg et d'étudier le meilleur plan d'action à adopter relativement au régime des eaux de la rivière Fairford, du lac Pineimuta, du lac Saint-Martin et de la rivière Dauphin.
- On a entrepris des séances de consultation sur l'éventuelle désignation des réserves de parcs de Manigotagan et du lac Chitek. On a mis fin aux séances de consultation sur le projet de parc provincial Atikaki-Sud et sur l'agrandissement de la réserve de parc Amisk.
- On a poursuivi l'évaluation portant sur l'élargissement de la représentation au sein du conseil consultatif du lac Winnipegosis de manière à ce que tous les secteurs d'activités liés aux pêcheries, notamment la pêche commerciale, les Autochtones et le tourisme, soient représentés. Le ministère travaille afin de constituer un conseil de gestion des intervenants élargi dont le mandat serait de le conseiller sur la gestion du lac Winnipegosis.
- Le ministère a publié un document de discussion sur les modifications à la ***Loi sur l'environnement*** afin de mettre en œuvre les recommandations de la consultation antérieure sur la mise en œuvre du développement durable (COSDI). Les consultations multilatérales sur ces modifications ont commencé en octobre 2001 et se sont terminées en mars 2002. On a reçu le rapport résumant les conclusions de la consultation et les recommandations en avril 2002.
- On a modifié le *Règlement sur la formule de transport du poisson* afin d'améliorer le processus de collecte d'information, de surveillance et de répartition des précieuses ressources halieutiques du Manitoba. Cela est de plus en plus difficile étant donné la récente hausse des ventes illégales de poisson qui n'a pas été pris en vertu d'un permis. La modification exige de toute personne qui

transporte du poisson et qui n'est pas le pêcheur commercial titulaire d'un permis ayant précisé à quel endroit serait livré le poisson pris en vertu d'un permis de pêche commerciale (y compris le poisson livré à un centre d'emballage), qu'elle remplisse une formule de transport du poisson.

Accès à l'information

Pour respecter le dessein de la troisième directive, le ministère doit s'assurer de ce qui suit :

a) qu'il améliore et peaufine l'information d'ordre économique, environnemental et social et relative à la santé humaine qui se rattache aux ressources naturelles et à l'environnement;

b) qu'il offre et favorise les occasions de donner à tous les Manitobains un accès égal et en temps voulu à son information.

Exemples :

- Le ministère a terminé la deuxième année de l'étude du bassin de la rivière Assiniboine. L'information qui en découle contribuera à assurer la durabilité du développement actuel et à venir le long de la rivière Assiniboine. Les travaux ont été coordonnés par l'entremise d'études réalisées par les villes de Brandon et de Portage-la-Prairie.
- La Direction des forêts du Manitoba et le Centre de foresterie du Nord de Forêts Canada ont publié *Les forêts du Manitoba*, un document de 16 pages qui fait un survol des forêts, de l'économie forestière et de l'aménagement forestier du Manitoba.
- Un protocole d'entente a été signé avec Forêts Canada dans le but d'établir au Manitoba une série de parcelles permettant de surveiller l'écosystème à long terme. Ces parcelles permettront d'analyser les données relatives à la durabilité des forêts et au changement climatique devant être communiquées à l'échelle provinciale, nationale et internationale. On a achevé la première phase du UFIS (Urban Forestry Information System). Le UFIS est un système de base de données perfectionné conçu pour surveiller les maladies et les parasites des forêts urbaines. Il servira à surveiller l'analyse et l'abattage des arbres atteints de la maladie hollandaise de l'orme ainsi que le bois d'orme de chauffage dans les communautés manitobaines participant au programme de gestion de cette maladie. Le système peut représenter géographiquement l'incidence de la maladie. Les données géographiques sont essentielles pour surveiller et analyser la propagation de la maladie au fil du temps, et serviront à analyser et à améliorer davantage les stratégies actuelles de lutte contre cette maladie mortelle de l'orme.
- On a mis fin aux négociations fédérales-provinciales-territoriales concernant le Système national d'information forestière (SNIF). Le site Web du SNIF permettra au public d'accéder aux bases de données sur les forêts du Canada et les conditions environnementales, et de les étudier. L'information sur les méthodes d'aménagement forestier comprendra de l'information sur l'exploitation forestière, le reboisement, les incendies de forêt et les indicateurs biophysiques et environnementaux connexes.
- On a poursuivi l'établissement d'un site Web sur le développement durable dans le but d'intégrer ces notions dans le nouveau *Cadre commun des résultats d'apprentissage en sciences, de la maternelle à la 8ᵉ année* du Manitoba. Le site est une première au Manitoba en ce sens qu'il intègre de l'information sur la gestion des pêches dans un programme d'études en sciences au moyen de l'Internet. On a fait la promotion du site lors d'ateliers et de conférences s'adressant aux enseignants, dont l'atelier *Special Areas Group* (sciences). Le travail avec les éducateurs se poursuivra en vue d'élaborer des exercices pour les élèves de secondaire 1 à 4 qui seront incorporés au site à l'automne 2003.
- Le personnel a maintenu sa participation à l'Envirothon du Manitoba en préparant des questions d'examen et en prenant part à la journée champêtre et à la composante orale. L'Envirothon est un programme scolaire et environnemental annuel de style olympique. On vérifie les compétences des élèves du secondaire (de la 9ᵉ à la 12ᵉ année) dans quatre disciplines (eaux, forêts, sols et faune) ainsi que leurs connaissances sur un thème annuel (cette année, le thème est la conservation et la protection du territoire agricole). Cette année, l'épreuve se déroule à Swan River et 21 équipes-écoles du Manitoba s'y sont inscrites. L'équipe gagnante du Manitoba représentera la province au National Canon Envirothon qui se tiendra dans le Maryland.

- Le ministère a continué à diriger une initiative à l'échelle gouvernementale visant à préciser un ensemble d'indicateurs de durabilité recommandés par la Table ronde manitobaine, ainsi qu'à préparer le rapport provincial sur la durabilité.

Planification et prise de décision intégrées

Pour respecter le dessein de la quatrième directive, le ministère doit s'assurer de ce qui suit :

a) qu'il encourage, facilite, établisse et assure des mécanismes de prise de décision et de planification qui soient efficaces, diligents, imputables et intersectoriels;

b) qu'il intègre dans sa planification et sa prise de décision une perspective intergénérationnelle des besoins futurs et des conséquences.

Exemples :

- La Direction des pêches a continué à coordonner bon nombre de projets de réhabilitation des bassins versants et des cours d'eau au Manitoba, ainsi qu'à fournir une aide à la planification. Une approche intégrée de planification vise à réunir les groupes d'intervenants et les organismes locaux dans le but de remettre les bassins versants en état. Le travail relatif au projet comprend des vérifications aériennes et au sol approfondies visant à déterminer les habitudes d'utilisation des terres et les fonctions naturelles qui affectent les bassins versants. On a également repéré des emplacements précis devant faire l'objet de mesures d'atténuation afin de protéger et d'améliorer des composantes précieuses relatives aux bassins versants, comme la qualité de l'eau et l'habitat des poissons et des espèces sauvages. On poursuit les initiatives entreprises au niveau des rivières Brokenhead, Valley et Upper Whitemud et de certains tributaires du bassin est du lac Manitoba (côté nord). On met présentement en œuvre de nouvelles initiatives de planification au niveau des cours d'eau suivants : rivières Black, Seine et Boyne et bon nombre de tributaires du bassin ouest du lac Manitoba (secteur Narrows).
- Le ministère a coordonné un processus interministériel visant à établir des stratégies de mise en œuvre du document intitulé *Water: A Proposed Strategic Plan for Manitoba*, y compris des stratégies provinciales sur des questions précises, des plans d'aménagement des bassins versants, un cadre législatif et des bases financières. La stratégie mènera à l'élaboration de mesures législatives exhaustives concernant la gestion de l'eau, ainsi qu'à une gestion et une planification locales des eaux fondées sur les limites des bassins versants.

Réduction et remplacement des déchets

Pour respecter le dessein de la cinquième directive, le ministère doit s'assurer de ce qui suit :

a) qu'il encourage et promeuve, tant au sein du ministère qu'à l'extérieur, le développement et l'exploitation de substituts de ressources rares, si ces substitutions sont viables sur le plan économique et environnemental;

b) qu'il réduise, réutilise, recycle et récupère les produits que le ministère utilise dans ses activités quotidiennes, et encourage, promeuve et facilite les 4 R dans la société en général.

Exemples :

- La section chargée de la gestion des contrats a continué à fournir ses conseils et son soutien au personnel du ministère en ce qui touche les obligations contractuelles. La section promeut également l'usage de produits écologiques dans ses activités quotidiennes en utilisant, entre autres, du papier et du toner recyclés, ainsi qu'en produisant des rapports recto-verso et en recyclant tout le papier superflu. La section exigera aussi de ses fournisseurs, dans tous ses documents d'appel d'offres, qu'ils utilisent des produits écologiques, et ce, afin d'offrir un produit ou du matériel ainsi que des méthodes d'élimination des déchets plus écologiques.
- La Section de la qualité de l'air a maintenu sa participation au programme d'utilisation d'un parc commun de véhicules en partageant ses véhicules avec d'autres usagers. Le personnel a continué d'utiliser des moyens de transport de remplacement pour se rendre aux réunions, notamment la marche, les transports en commun ou le covoiturage.

- La région d'Entre-les-Lacs a continué à travailler avec les municipalités à la gestion des déchets solides, notamment en encourageant la fermeture de sites d'enfouissement inadéquats et en établissant des sites adéquats, ou en convertissant ces sites en stations de transfert des déchets. Le personnel a poursuivi son travail dans le but d'obtenir la fermeture du dernier puisard d'eaux usées de la région. La construction de bassins de stabilisation des eaux usées ou d'autres installations de traitement permettra de traiter adéquatement les eaux d'égout.
- Conservation Manitoba a participé au Northern Waste Committee (NWC), qu'il a présidé, et qui avait pour objectif de régler la question de la gestion des déchets solides dans le Nord. Le comité comprenait des groupes d'intervenants et a été formé par suite de la publication du *Rapport final du Groupe de travail manitobain sur la gestion régionale des déchets : Plan d'action et recommandations pour une gestion régionale intégrée des déchets* (décembre 1999). Le comité a examiné les problèmes et les obstacles qui gênent la planification régionale de la gestion des déchets. Un rapport provisoire a été élaboré et les consultations auprès des intervenants devraient avoir lieu à l'automne 2003.

Recherche et innovation

Pour respecter le dessein de la sixième directive, le ministère doit s'assurer de ce qui suit :

a) qu'il encourage la recherche, le développement, l'application et l'échange de connaissances et de technologies favorables à la prospérité économique, à la salubrité de l'environnement, à la santé humaine et au bien-être social, et qu'il y contribue.

Exemples :

- On a mis fin au projet pilote de gestion écosystémique dans l'écorégion des hautes terres du lac Seul sur la rive est du lac Winnipeg, et on a publié le rapport final de l'équipe scientifique ainsi qu'un sommaire. Trois rapports avaient été publiés antérieurement, soit *Socioeconomic Study*, *Land Use Studies* et *Values Team Final Report*. L'information et les bases de données d'importance qui ont été produites devraient grandement faciliter la planification dans la région est du lac Winnipeg.
- Le ministère a participé à un projet d'indicateurs de durabilité dans le cadre d'un programme de jumelage Canada-Afrique du Sud. Ce projet visait à aider les représentants de la Province du Nord-Ouest de l'Afrique du Sud à élaborer un processus d'établissement et de transmission de données sur les indicateurs de durabilité relatifs à leur province.
- Comme la question de la pollution atmosphérique préoccupe le public, on a entrepris et achevé une étude intitulée *Flin Flon Garden Study*. Cette étude visait à déterminer les niveaux de métaux lourds dans les légumes de jardin et dans le sol de Flin Flon, et à évaluer les risques qu'ils représentent pour la santé et l'environnement.

Introduction

The information contained in this, the Annual Report for Manitoba Conservation, 2002/03 provides insight into the many and various activities undertaken by the dedicated staff of the Department on behalf of Manitobans during this past fiscal year.

Manitoba Conservation protects, manages, and sustains development of forest, fisheries, wildlife, water, Crown and Park land resources, protects environmental integrity, and ensures a high level of environmental quality for present and future generations. Through integrated management of these functions the Department is the lead agency for providing outdoor recreational benefits for Manitobans and visitors.

Manitoba Conservation is a large, diverse department, with a staff presence in more communities and wide-ranging geographic locations than any other department of the Manitoba government. There are currently 59 community-based district and regional offices not including various office locations in the City of Winnipeg. With so many offices and points of contact with the public throughout our province on a daily basis, we have the responsibility to serve our clientele in an efficient and effective manner, regardless of the issue. Utilizing multi-disciplined staff to address various needs and problem-solve at the community level allows us to ably respond to any situation.

Through the effective integration of the former Departments of Environment, and Natural Resources we have become better equipped to implement the principles and practices of sustainable development and coordinate programs which protect the environment and conserve our natural resources.

The department is working hard to make more programs and services available to the public in convenient locations across Manitoba, including providing electronic access. By using our frontline staff to build a positive relationship with the public we hope to improve our ability to protect and manage our future in cooperation with all Manitobans. The public plays an important role in the delivery of various programs including participation in the toll-free T.I.P. Line, reporting forest fires and illegal harvesting of fish and wildlife and other infractions.

During this past year, the new Department of Energy, Science and Technology was formed, resulting in the movement of the Climate Change Branch from Conservation to this new department. Despite this consolidation of activities into another department of government, Manitoba Conservation remains actively involved in climate change issues. The department will continue to cooperate with all levels of government and the public to ensure that we are addressing the effects of global warming and putting in place a strategy for the future.

Introduction

L'information figurant dans le présent *Rapport annuel 2002-2003* de Conservation Manitoba donne un aperçu des nombreuses et diverses activités entreprises au cours du dernier exercice par le dévoué personnel du ministère au profit de la population manitobaine.

Conservation Manitoba protège, gère et soutient le développement des forêts et de la pêche et l'aménagement des eaux, de la faune et des terres publiques, protège l'intégrité environnementale et garantit un environnement de grande qualité pour les générations actuelles et à venir. Préconisant une gestion intégrée de ces ressources, le ministère est l'organisme de référence lorsqu'il s'agit de proposer des activités récréatives extérieures à la population manitobaine et aux visiteurs.

Conservation Manitoba est un important ministère diversifié qui dispose de personnel dans plus de communautés et à plus d'emplacements que tout autre ministère du gouvernement du Manitoba. On trouve présentement 59 bureaux de district communautaires et bureaux régionaux, en plus des divers bureaux à Winnipeg. Comme nous disposons d'un très grand nombre de bureaux et de points de service à la clientèle dans la province, il est de notre responsabilité de servir nos clients efficacement, quel que soit le problème soulevé. En recourant aux services d'un personnel spécialisé pour répondre aux divers besoins et résoudre les problèmes de la collectivité, nous pouvons dominer habilement toute situation.

L'intégration efficace des anciens ministères de l'Environnement et des Ressources naturelles a fait que nous sommes plus à même de mettre en œuvre les principes et les pratiques de développement durable, ainsi que de coordonner les programmes de protection de l'environnement et de conservation de nos ressources naturelles.

Le ministère travaille afin d'offrir des programmes et des services destinés au public, notamment des services d'accès électronique, à des endroits facilement accessibles du Manitoba. En utilisant notre personnel de première ligne pour établir une relation positive avec le public, nous espérons accroître notre capacité à protéger et à gérer notre avenir en collaboration avec toute la population manitobaine. Le public joue un rôle clé dans la prestation de divers programmes, notamment en appelant la ligne sans frais T.I.P. et en signalant les feux de forêt, les cas de pêche illégale et tout autre type d'infraction.

Au cours de la dernière année, on a créé le nouveau ministère de l'Énergie, des Sciences et de la Technologie. Cela a entraîné le transfert de la Direction du changement climatique, qui relevait jusqu'alors de Conservation, vers ce nouveau ministère. Malgré le regroupement des activités dans un autre ministère, Conservation Manitoba demeure grandement concerné par les problèmes que pose le changement climatique. Le ministère continuera de collaborer avec tous les niveaux de gouvernement et avec le public afin de s'assurer que l'on fait face aux effets du réchauffement de la planète et que l'on établit une stratégie d'avenir.

Administration and Finance

Provides executive management of programs and management services, including financial, human resource, computer, and administrative support.

Minister's Salary

The Minister's Salary provides the Minister with additional compensation to which an individual appointed to Executive Council is entitled.

Table AF.1

12.1(a) Minister's Salary

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	28.3	1.00	28.4	(.1)	

Executive Support

This area comprises support staff in the Offices of the Minister and Deputy Minister of Conservation.

The purpose of Executive Support is to develop, implement and oversee policies and programs which are designed to attain, over the long term, the goals set out in the Department's role and mission statement, advise the Minister on matters relating to the Department, provide policy direction for departmental programs, co-ordinate departmental communications activities and initiatives, and provide administrative support for the Offices of the Minister and Deputy Minister.

Table AF.2

12.1(b) Executive Support

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	455.3	8.00	458.6	(3.3)	
Total Other Expenditures	107.0		108.8	(1.8)	

Corporate Services

The Branch provides financial, human resource, administrative, computer support, warehousing and library services to ensure appropriate use of resources and effective delivery of programs, in compliance with policies and procedures.

Financial Services include processing of revenues and expenditures in accordance with legislative, Treasury Board, and Departmental requirements, estimates preparation, asset management, accountable advances, expenditure monitoring and reporting, and cashflow forecasting.

Administrative Services include annual report preparation, vehicle co-ordination, parking administration, central inventory, delegated financial signing authorities, employee housing, records management co-ordination, freedom-of-information management, French language services co-ordination, warehousing, and risk management and workplace safety and health.

Information Technology Services include administration, planning, project management, application planning and operational support, management and co-ordination of external resources, and co-ordination of Desktop Management.

The Conservation and Environment Library delivers library and information services to staff of Manitoba Conservation, Environment Canada in Winnipeg, Canadian Council of Ministers of the Environment, and the public. An additional 6,300 records were added to the library's internet-accessible database during the year, bringing the total number of records in the database to over 35,000. A new internet-accessible database was created for Public Registry files as well, with links to electronic proposal summaries and Environment Act Licences. Library staff provided a variety of services in response to approximately 3,000 information requests from staff and the public, in addition to coordinating interlibrary loans, current awareness services, and periodical subscriptions.

The Department is continuing with its Records Management Review Program. A complete Departmental review will be continuing over next year. Over 1,360 boxes of inactive files were transferred to storage/disposition to Provincial Records Centre/Archives.

One hundred and twenty-two (122) requests under ***The Freedom of Information and Protection of Privacy Act*** were actioned.

The Department program is continuing with respect to complying with legislation for notification, use of personal information, and updating of personal-information banks.

The Department continues to implement its French Language Services Plan to reflect current operations and in keeping with the *Chartier Report* on French language services. Translation of documents and the Website continues. The department continues to participate in the Bilingual Service Centres.

Risk Management Program assists staff to identify situations that could disrupt programs or result in unexpected losses, assists evaluating hazards with programs and facilities, and assists developing and prioritising risk control to reduce or eliminate hazards. Liability incidents involved payment of $3,882 and claims for property damages were reported with values totalling $40,792. Total building/property evaluations reported for insurance purposes were $122,064,000.

The Departmental warehouse is the equipment/supply storage and mobilisation point for Branches and Fire Operations Centre. In emergencies, such as fire and flood, it becomes the logistical support base for all equipment. Disposition of 598 fleet and Department vehicles was administered.

Regionalised Workplace Safety and Health/Hearing Conservation programs resulted in 881 staff participating in WSH courses and 442 staff screened in the Hearing Conservation Program. Risk Management field inspections of sites and capital works were carried out and all reported public accidents/incidents were reviewed.

Table AF.3
12.1(c) Corporate Services

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	681.9	13.00	660.6	21.3	
Total Other Expenditures	640.1		680.9	(40.8)	

Financial Services

The Branch provides financial services to the Executive, program managers and operational staff, undertakes comptrollership, ensures that the public has convenient access to hunting and fishing licences, and *Park Vehicle Permits*. The Branch coordinated departmental implementation of financial, procurement and asset management components of the *SAP* accounting system.

Budget Management Section led implementation of SAP accounting system, developing all financial coding, reporting, general ledger implementation and reconciliation, and advising staff on SAP financial transactions. The Section manages and maintains controls on the departmental expenditures and revenues, enabling the Department to complete the year within budget and meet budgetary targets. The department is comprised of 10 divisions and 65 branches, with an operating expenditure budget of $144,248.5, a revenue budget of $130,504.2 and a capital budget of $700.0. This Section has the responsibility of coordinating and preparing the departmental quarterly expenditures, revenues and capital cashflow reports and yearly preparation of the departmental Expenditures and Revenue Estimates. The Section controls and administers the departmental asset management component and also provides training in various financial processes of the department.

Licensing Section managed a network of 843 private and 126 departmental Licence Vendors through which convenient public access was provided for angling, hunting, migratory waterfowl, Park Vehicle Entry, trapping, and various other licences and permits. Licensing also manages the revenue collected by the Department for camping and park vehicle permits. Statistical information on campground occupancy and revenue generated by each is also produced. Total sales were 570,734 licences and permits for combined revenue of $11,929,093. Vendor activity included 83 new appointments, 83 discontinuances, 9 suspensions and 15 reinstatements. Seven hundred and eighty-one (781) private vendors are in rural areas.

Where licence availability is limited, draws to allocate hunting opportunities for Manitoba residents are conducted. A multi-level priority licence draw system was used. Of 11,294 applicants, 6,555 were awarded licences.

Revenue Management processed over 23,820 payment transactions totalling $125,707,864. These consisted of 14,836 mail-in remittances worth $26,635,532, 8,984 direct sales by Winnipeg cashier totalling $2,474,701, and $96,597,631 in Water Power Rental and Land payments. $4,219,310 in over 7,800 invoice payments was processed by Fine.Line, allowing for prompt deposit of funds and electronic updating of client records. Payment options available to these clients included using a bank machine, on-line and telephone banking. Credit cards were accepted at 40 locations, of which 34 also accepted debit cards. Revenue Management processed fees from 153 revenue sources.

Public Information Section responded to the following requests for information and assistance:

- 50,560 telephone inquiries handled by Information Officers.
- 53,190 calls to Public Information Line, of which 9,465 employed automated information, and the balance directed to staff.
- 71,111 in-person requests.
- 5,702 inquiries through the Internet.
- 5,390 information packages mailed.

Public Information Section also supplies Region and District offices with most publications distributed by the Department, and provides program assistance to Branches, such as scheduling tours of Narcisse Snake Dens, accepting and recording Seasonal Camping Applications and funds, and the like.

Disbursements Management Section processed approximately 25,000 procurement transactions and 34,500 payments from 48,000 documents. The Section administered the purchasing card program on behalf of 548 cardholders located throughout the Province. The Section provided co-ordination and guidance to staff working with the SAP system.

During the 2002/2003 fiscal year the Contract Management Section administered over 187 new contracts for construction, engineering and environmental consulting and fee for service agreements for a total of $14,663,143.00. In addition, the section handled 85 contracts carried over from previous years. The section also provided advice to program managers on contract technicalities, tendering policies, bid opening practices, insurance and bonding requirements. Thirty-four (34) new grants to organisations totalling $1,983,162.00 were issued and monitored. The Section is currently working towards completion of a Manual on Contracting and Tendering Policies to be utilised by Department of Conservation staff. The Section continues to prepare specialised financial reports for the Executive, Provincial Auditors, Manitoba Finance and Treasury Board Secretariat upon request.

For the 2003/2004 fiscal year the Contract Management Section will continue to provide advice and support to Departmental Staff regarding contractual obligations. The Section is also promoting the use of "green" materials in its day to day operations by using recycled paper, toner, etc., along with producing two sided reports and recycling all superfluous paper. The Section is also going to incorporate the use of "green" materials/products in all tender documents, which will result in obtaining "greener" services /products and waste disposal practices from contractors.

Table AF.4

12.1(d) Financial Services

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	1,482.5	33.33	1,423.5	59.0	
Total Other Expenditures	278.2		312.0	(33.8)	

Human Resource Services

Staffing

- Staffing activity included 429 competitive appointments, 39 direct appointments and 54 term extensions. Guidance and advice were provided on Departmental Employee staffing, which has been delegated to managers: there were about 224 appointments to Departmental Employee positions. There were no selection appeals.
- Assisted in developing and implementing the Youth Employment (Green Team) Program, employing about 327 youths in rural Manitoba.

Labour/Employee Relations

- Provided guidance and advice to management on 81 labour relations issues, including appropriate discipline, and negotiating settlements to resolve issues before the formal grievance stage. There were 21 formal grievances.

Classification

- Classification activity included 62 position classification reviews completed. There were no classification appeals.

Pay and Benefits

- Processed pay and benefits for about 2,100 staff.
- Provided guidance and advice on pay administration issues.

Organizational Review and Development

- Provided guidance and advice on implementation of organizational changes.
- Employees attended 96 training courses conducted by Organization and Staff Development, 22 at educational institutions, and 163 provided by private vendors.

Employment Equity

- Participated in Aboriginal Public Administration Program.
- On-going implementation of Aboriginal Employment Strategy Program.

Table AF.5

Employment Equity Representation

Fiscal Year	Total		Male		Female		Aboriginal		Persons w. Disability		Visible Minority	
	#	%	#	%	#	%	#	%	#	%	#	%
2000-01	2081	100	1436	69.0	645	31.0	308	14.8	37	1.8	28	1.3
2001-02	2084	100	1414	67.9	670	32.1	378	18.1	47	2.3	34	1.6
2002-03	2118	100	1422	67.1	696	32.9	382	18.0	46	2.2	37	1.7

Table AF.6

12.1(e) Human Resource Services

Expenditures by Sub-appropriation	Actual 2002/03		Estimate 2002/03	Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	980.4	20.00	997.8	(17.4)	
Total Other Expenditures	74.8		84.8	(10.0)	

Information Technology Services

The Branch provides internal information technology service and expertise, including systems analysis, design, implementation, corporate database management, and development and management of a yearly department-wide information technology systems plan. The Branch develops and maintains the Manitoba Land Initiative spatial data warehouse.

Major Activities

- Fifteen modules of the Environmental Management System (EMS) are now deployed throughout the Department, via computer networking technology, to over 100 users. Investigations are underway to acquire and integrate a Drinking Water module into the system. The EMS software has been acquired from the Government of Alberta through a partnership agreement with them.
- Software development is being conducted on the ENFOR package that is a suite of tools designed to replace an out-dated enforcement/tracking and occurrence reporting system in Region offices. The system will be intranet-based and available to over 200 Natural Resource Officers and Region staff.
- Extensive software modifications and enhancements to the Water Licensing software package (WARMS) were completed for Water Branch in order to deploy the application into the managed environment and provide additional GIS and licensing functionality.
- A new Emergency Fire Fighters payroll system for Human Resource Services Branch was developed to replace and enhance the outdated package in use. The application was written in Oracle Designer and is undergoing testing and deployment.
- Phase III of the Fisheries Branch database was completed under contract and successfully deployed into the managed environment.
- Further enhancements were completed to the Red River Valley flood decision support system to include additional digital elevation models and user tools.

- Negotiations were completed with the Federal National Forest Information System (NFIS) that involves all Provinces and Territories. NFIS will provide an Internet Web-based system wherein the public can find and review databases on Canada's forests and environmental conditions. Information on forest management practices will include harvesting information, reforestation, forest fires, and related biophysical and environmental indicators. The Province will soon be taking delivery of a new Internet map server required to make the data available to the public over the Internet.
- The Manitoba Land Initiative (MLI) data warehouse is now fully operational and available online to the general public via the Intranet. This repository contains all government geospatial GIS data and related databases and meta-data, with interactive mapping tools. The data warehouse now has over 1,600 registered users.
- The Branch undertook additional Web page development to meet the needs of the public. Conservation now has over 12,000 active Web pages, managed by a Web Co-ordinator. Additional enhancements were also developed on the internal Intranet site.
- The new Crown Lands Registry Information System is now completed and has been deployed to over 50 users. Additional users will be brought on line during the course of the next fiscal year. A review and business requirements analysis is underway for the design of a mapping component to the registry.
- A new software application to support commercial fisheries management in the Interlake Regional office was developed and deployed.
- A new version of the Wildlife management software package (BIOTICS) was acquired, tested, and deployed for the Wildlife Branch. Testing and training are now underway.
- Additional functionality and enhancements were undertaken on the Multi Level Draw (MLD) application for the Licensing Section.
- The Branch re-wrote a new application for the Parks Branch to facilitate the public drawing and information system required for the Seasonal Campground Draw System used for all provincial parks.
- A complete refresh of the Forestry Branch hardware technology was business accessed, tendered out, and deployed during the year. This hardware environment supports the forest inventory and many other forest management requirements for the Branch.
- The Branch continues co-ordination of the Department's GIS requirements through a central GIS server environment and chairing of a Departmental GIS Working Group and regional committees. A new Standards Committee was appointed to look after the review and/or development of new standards within the geomatics and GIS community of data developers and data users.

Table AF.7
12.1(f) Information Technology Services

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	1,270.9	20.00	1,262.5	8.4	
Total Other Expenditures	341.8		335.4	6.4	

Conservation Support Services

Computer Graphics

The unit provides computer-aided design and drafting (CAD), desktop publishing, and geographic information system (GIS) services to the Department. Specialised CAD services include engineering plans for capital works and infrastructure maintenance projects. Desktop publishing produces high-quality informational materials for programs, policies, and initiatives. GIS services provide expertise for spatial data analyses and preparation of geo-referenced maps.

The unit received 240 requests for service, of which 228 were completed, 8 were rescinded, and 4 are in progress. Figure 2 shows distribution of staff time among clients.

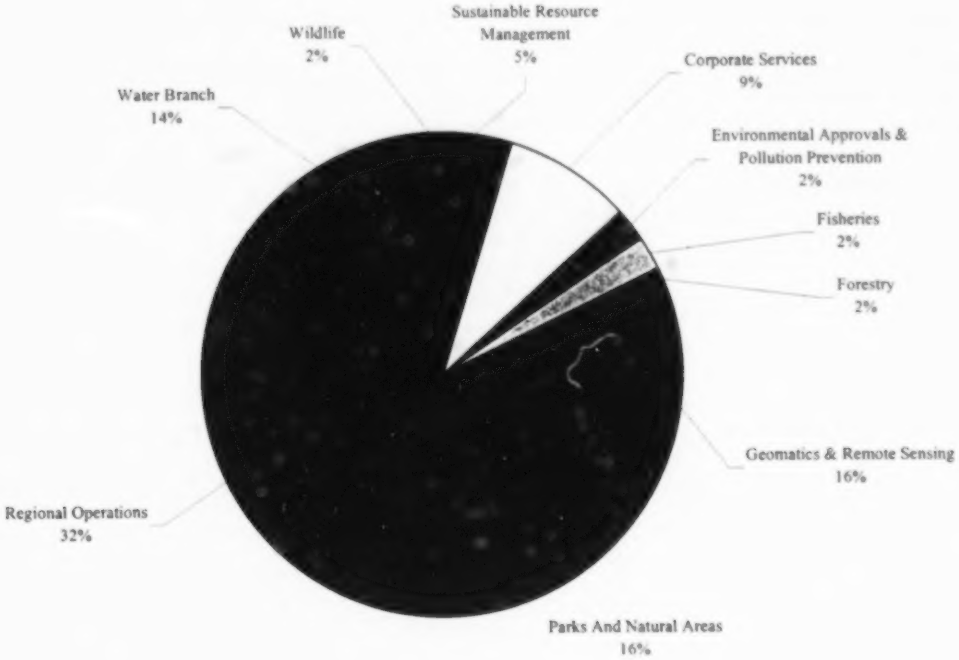


Figure 2: Breakdown of Staff Time Spent by Client

Services provided included:

- Supported Waterway Maintenance program by preparing engineering plans for the maintenance and refurbishment of water control infrastructure such as Silver Drain, T-Drain, Fisher River Diversion and Options, LaFonde Drain, Pansey Drain, Rus Drain, Rempel Drain, Plishka Drain Extension, 4 Mile Drain R.M. of Franklin and Brokenhead River slide Area.

- Prepared construction plans for Lowe Farm Valley Town Dike, Rosenfeld Valley Town Dike and Fish Creek Bridge.

- Work continued on the development of Red River Flood Management System that will be used to disseminate flood-related information to general public and government staff.

- On-going efforts continued to check the integrity of all spatial data currently residing in Manitoba Conservation data library. This will ensure that all Manitoba Conservation staff has access to the most current and accurate data.

- Provided training and support to Manitoba Conservation staff on the use of Arcview (GIS) Software and the availability of data.

- Undertook responsibility to define standards for geospatial data.

- Provided Desktop publishing services to all programs areas through complete publication of several booklets and brochures i.e., *2003 Hunting Guide*, *2003 Anglers' Guide*, *Atikaki Interpretive Brochure*, *Duck Mountain Management Plan*, *Atikaki Provincial Park & Bloodvein Canadian Heritage River Management Plan*, *Manitoba Conservation Career Guide* and *Assiniboine Aquifer Management Plan*.

- Prepared storyboards and display boards for management and various program areas such as Water, Fisheries and Wildlife.

- Continued to provide support to Manitoba Geographical Names Program, to honour war casualties. This included layout design and complete artwork for production of the publication: *A Place Of Honour: Manitoba's War Dead Commemorated in its Geography*.

- Prepared summer, winter and seasonal-use maps, trail and route maps for Parks and Natural Areas Branch. Designed and produced signage and permits for Parks campgrounds.

- Prepared a variety of materials, such as PowerPoint presentations, slides and overheads, for presentations to public meetings and hearings.

- Prepared annual updates of Crown Land Operational Code maps for Crown Land Classification Committee.

- Supported Water Resources Water Licensing Program, by preparing location plans for the production wells at various towns, farms and industrial operations. Also provided mapping services to support Drainage licensing. Prepared location maps for Environmental Approval Branch as part of newspaper advertisement for public hearings.

- Performed miscellaneous tasks such as the plotting of hydrology data, and mean monthly levels of Manitoba lakes. Designed report covers, charts and graphs for various publications. Maintained Department organizational charts for Human Resources Branch.

Table CS.1

12.2(a) Computer Graphics

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	485.0	10.00	480.9	4.1	
Total Other Expenditures	36.8		38.1	(1.3)	

Survey Services

The Branch administers and enforces ***The Surveys Act*** (Part II) and *The Survey of Mining Claims Regulation*, approves Plans of Survey for disposition of land under ***The Crown Lands Act*** and *The Mineral Disposition and Mineral Lease Regulation* (***The Mines and Minerals Act***), represents Manitoba on matters related to provincial boundaries, provides survey services to other Departments, and maintains the Manitoba Spatial Reference Network and Land Survey System. Public benefits include a secure process for conveyance and reservation of Crown land and rights therein, an economical survey service for acquisition and disposition of land, a survey system for determining property boundaries, and a geodetic survey network for spatial referencing of land-related information.

Land Survey System

The program restores survey monuments, instructs surveyors, examines plans of survey of Crown lands, maintains the province's boundaries, and operates the Crown Land Survey Information Centre.

The Branch placed 131 monuments in township and parish-lot systems of survey, provided 18 sets of survey instructions, examined 27 plans of survey, and responded to 300 information requests. Survey Services provided 400 marker posts to private land surveyors at no charge for protecting and locating survey monuments of the township system.

Conversion of plans of survey, control survey station descriptions, and surveyors' field notes to electronic format continued. Scanning of on-site records now includes 7,850 of 10,000 plans of survey and 82 of 260 field books. Scanning of station descriptions is current, which presently consists of 2,600-control survey sites. Off-site records consisting of 11,000 plans of survey will be considered in future years.

Information Centre continued development of Field Book Database for users seeking surveyor's field notes.

Manitoba Spatial Reference Network Program

The program maintains a network of survey monuments whose positions and/or elevations have been determined. Disciplines such as civil engineering, resource management, and land surveying require this network to determine position and elevation of natural and man-made features and related information. This is essential to ensure compatibility of all geomatics, navigation, and other spatial information, to permit exchange and merger, seamlessly and economically.

The Manitoba Spatial Reference Network is integral to Canadian Spatial Reference System (CSRS), contributing to a reliable national infrastructure for referencing spatial information. Staff expanded the primary component in northern Manitoba and continued upgrading mathematical positioning of network stations, which now comprises 181 primary and roughly 10,000 secondary stations, with CSRS 1998 co-ordinate values.

A license from Natural Resources Canada was continued to modify, reproduce and redistribute Canadian Geodetic Bulletin Board Service Digital Information, providing 'one-stop shopping' for basic control survey information.

Manitoba continued a federal-provincial-territorial *Memorandum of Agreement* to enhance and expand application of GPS technology. This will provide a national real-time GPS correction service over Canada and beyond, improving efficiency and effectiveness and enabling applications not previously possible. It will benefit government and industry by improving standardisation of data collection and positional accuracy, while lowering costs and improving services that rely on spatial referencing in such applications as natural resource management, environment monitoring, agriculture, civil engineering, land management, trucking and shipping, fleet management, aviation, marine operations, mineral exploration, mining, facilities management, and emergency services. A private contractor has designed and built the satellite up-link hub and ground receiver for transmission of correction signals to GPS users. The project office plans beta trails in April, May and June 2003. The contractor plans full-scale production and operation in July 2003. Implementation of the marketing strategy is presently underway.

Survey Services Program

The Program provides land, engineering, and control surveys and related services for acquiring and disposing of land, constructing and maintaining public works, and spatially referencing land-related features and information, including:

- Subdivision, right-of-way, parcel, and easement surveys.
- Terrain modelling and contour surveys, including beds of water bodies.
- Cross-section and centre-line profile surveys.
- Project-specific mapping and engineering control surveys.
- Topographical and location surveys.
- Cadastral mapping.
- Air-photo compilations.
- Deformation and subsidence surveys.
- Land dimensions, quantities, and spatial co-ordinates.
- Administrative boundary plans.
- Legal descriptions and title plots.
- Structure location certifications.
- Land transaction documents.

Major client departments included Manitoba Transportation and Government Services (Construction and Maintenance, and Land Management Services), Manitoba Conservation (Water Management, Parks and Natural Areas, Lands), Manitoba Aboriginal and Northern Affairs (Agreement Management Co-ordination, and Community Support Services), Manitoba Industry, Trade and Mines (Mines and Petroleum), and Manitoba Intergovernmental Affairs (Local Government Support Services, and Water Services Board).

Land description services are offered to municipalities, law and survey firms, and citizens, for Crown land reservations, dispositions, and other consents or rights, for such purposes as subdivisions, sales and exchanges, plan cancellations, and closing bylaws. These services include preparation of legal descriptions, calculation of areas, reviews of easement documents, reports on mines and minerals, and preparation of Minister's Orders and Consents.

Survey Services achieved its cost-recovery objective. Surveyors and survey technologists carried out work on 426 projects: 195 land surveys, 10 control surveys, and 221 land descriptions. Noteworthy work included:

- Parcel surveys of land selections under Northern Flood Agreements for Cross Lake First Nation, Fox Lake First Nation, and Moose Lake First Nation.
- Inspection surveys for Winnipeg Land Titles Office concerning the work of Manitoba Land Surveyors.
- Right-of-way survey of PR 304 between Manigotagan and Long Lake.
- Retracement and right-of-way surveys of PTH 16 from Minnedosa and Neepawa.
- Retracement survey of PTH 1 between Hargrave and the Saskatchewan border.
- Right-of-way survey of PTH 1A at junction of PTH 1 for future improvements and relocation.
- Retracement and right-of-way surveys of provincial road from Leaf Rapids to Ruttan Mine to South Indian Lake.
- Right-of-way survey of PTH 10, PR 285, and Umpherville Road through The Pas Indian Reserve (No. 21A, 21B, & 21E).
- Right-of-way and parcel surveys for provincial road and airport site within St. Theresa Point and Wasagamack Indian Reserve (No. 22)
- Right-of-way survey of PR 374 over the Nelson River (south of Cross Lake) for construction of Netnak Bridge and adjoining road.
- Cadastral mapping of Split Lake Resource Management Area (5,567,180 hectares).
- Administrative plans to support the expansion of Manitoba's Parks system.
- Training of Manitoba Conservation staff (45) on GPS technology, geographic and map coordinate systems, height systems, and hand-held receivers.

Table CS.2
12.2(b) Survey Services

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	1,372.8	32.00	1,660.5	(287.7)	
Total Other Expenditures	450.0		457.6	(7.6)	
Total Recoveries	(1,540.2)		(1,570.7)	30.5	

Distribution Centre

The Centre serves government and public with map sales, air-photo library, support for projects, and reproduction of material. The market for these products is primarily the public.

40,000 maps were sold directly or through about 155 dealers in Manitoba, northwestern Ontario and north-central USA. Canadian-produced maps experienced increasing sales to outdoor recreational users due to marketing at US outdoor recreational venues. Dealer numbers grew due to the Regional Distributor Agreement with Fisheries and Oceans Canada, increase in discount rate for hydrographic charts, and expansion of market boundaries.

New charts for Lake of the Woods and part of Winnipeg River system (largest area for sales), printed on water-resistant paper, became available during the spring and summer months. These charts are more user friendly, they are now folded and easier to use in boats.

New products and product lines have been added, geared to client needs and requests. Printing on demand for certain products is now available, reducing need for large pressruns.

The front sales area at 1007 Century Street was redesigned to provide more display area for mapping products. Feature walls were designed to reflect recreational users' needs.

The centre operates government's first credit-card-secured e-commerce site, *Canadamapsales.com*, offering maps – including all topographic maps for Canada – to a market without geographic boundaries, that never closes. The site generated $27,000 in sales in its third year. New product pages were added to the site this year.

Sale of mapping products and the e-commerce site is promoted by advertising in Yellow Pages, *Anglers' Guide*, Travel Manitoba publications, and display headers. Product brochures were completely re-designed to better reflect the products and their users. To promote map sales to our largest client group, the outdoor recreational user, for whom Canada is a favourite destination, *Canadamapsales.com* participated in recreational consumer shows: Chicagoland Sport Fishing Show, Northwest Sport Show (Minneapolis), Winnipeg Boat Show, and two All-Canada Shows (St. Charles and Green Bay).

Air Photo Library began updating the index system by computerising flightline information for all air photos.

2,000 aerial photographs added to Air Photo Library brought holdings to 888,669. 7,740 products were supplied to customers, Mapping Program, and other agencies. The photomechanical unit employs a scanner and computer to scan photography and supply quick prints, at better quality than the former copyproof camera.

A feasibility study was completed to explore more efficient/effective ways of operation and providing products and services to the public and other Departments. The study was forwarded to Treasury Board for review.

Geographic Mapping

Thematic mapping for government (21 projects) included park boundary plans, forestry maps, lake depth charts, Office of Drinking Water pamphlets, School Division boundary updates, and updating and publishing other products. Lake depth charts are being revamped gradually; the 200 charts available will be issued in the new format as stocks deplete. The *Manitoba Angling Map* has been revised and is now available, also printed on demand.

Table CS.3

12.2(c) Distribution Centre

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	417.7	9.00	390.7	27.0	
Total Other Expenditures	313.3		313.4	(.1)	
Total Recoveries	(64.2)		(50.0)	(14.2)	

Regional Operations

Programs and activities are delivered in six Regions: Northwest Region, Northeast Region, Interlake Region, Eastern Region, Western Region, and Red River Region, and supported from Headquarters Operations in Winnipeg, which also supervises the Fire Program, the Office of Drinking Water, and the Environmental Livestock Program. Multi-disciplined full-time and seasonal staff working from 59 community-based district and regional offices as well as Headquarters offices in Winnipeg carry out the work.

Programs and services delivered at the community level include:
- Field activities for resource and environmental management,
- Enforcement of legislation,
- Environmental Livestock Program,
- Office of Drinking Water,
- Dangerous Goods Section (includes transportation of dangerous goods, petroleum storage programs, contaminated sites, hazardous waste and emergency response),
- Public Health Inspection Programs,
- Operation of Provincial Parks, waterways and water control works,
- Emergency response to environmental accidents, forest fires and floods,
- Co-ordination of hunter-safety training and guide licensing,
- Problem wildlife control.

Headquarters Operations

Headquarters Operations directs and co-ordinates natural resource, environmental, and public health programs in the field through operational guidelines, development of policy and procedures, and liaison with resource Branches and external agencies. Cost-effective use of resources is ensured through operational guidelines, organisational standards and controls, monitoring effectiveness, financial controls, and reporting.

Environmental Support Services

Environmental Livestock Program

The Environmental Livestock Team administers the *Livestock Manure and Mortalities Management Regulation.* Team members, including Environment Officers and Environmental Engineers, are regionally based to provide local coverage. Primary team responsibilities include investigation of complaints, annual inspection of permitted manure storage facilities, inspection of storage facilities under construction, and enforcement of Regulations on management of manure and mortalities.

A total of 93 permits for construction or modification of manure storage facilities were issued during 2002/03. Staff conduct a minimum of three inspections during construction of facilities to ensure compliance with Permit and Regulation requirements and to address problems encountered during construction.

Staff conducted annual inspections of the 495 manure storage facilities for which permits were issued prior to 1994. Inspections focus on erosion protection for inner surfaces of earthen facilities, visible signs of erosion, leakage, construction defects or damage, potential environmental effects, and management of mortalities.

Audits were completed for 28 of the 291 manure management plans (9.6%) registered for the 2002 crop year. Charges were laid against some operators for excessive rates of manure application as well as against some operators who failed to register manure management plans.

A review and public consultation of the *Livestock Manure and Mortalities Management Regulation* was completed. A number of significant amendments to the regulation were developed, including dropping the regulatory threshold from 400 to 300 animal units, mandatory monitoring of the source of drinking water for livestock in large operations and certification of commercial manure applicators.

Environmental Livestock Program staff directed clean-up operations at two structural failures of aboveground steel manure storage tanks. The first incident occurred July 21, 2002 near MacGregor and spilled approximately 4,000,000 litres of manure. The second incident occurred March 17, 2003 near Fisher Branch and spilled approximately 2,270,000 litres of manure. Clean up was completed rapidly at both sites.

Headquarters Operations ensures consistent program delivery through development of procedures, standards and policies. Headquarters also administer Manure Management Plans, essential to regulate manure disposal for intensive livestock operations.

Manure management plans are an effective tool for ensuring the sustainability of livestock production by addressing the Sustainable Development principle of Stewardship. The plans prescribe application of manure at rates that are agronomically and environmentally sound, thereby ensuring crop production is economically viable while protecting groundwater quality for future use. Most large-scale hog producers register manure management plans annually as required; efforts are underway to obtain higher rates of compliance among other sectors.

The Sustainable Development Principle of Prevention is particularly well addressed by the permitting of construction, modification or expansion of manure storage facilities. The process, which requires engineering design, technical review, inspection and certification, is designed to prevent significant adverse environmental impacts from development of livestock production operations.

Table RO.1 shows enforcement over the last nine years.

Table RO.1
Livestock Regulation Enforcement 1994-95 to 2002-03

Fiscal Year	Prosecutions	Warnings	Orders	Fines ($)
1994-95	5	15	1	1,188.00
1995-96	8	13	1	1,716.00
1996-97	14	21	4	11,010.00
1997-98	15	12	6	6,726.00
1998-99	12	32	7	11,862.00
1099-00	9	35	10	8,496.00
2000-01	16	49	22	8,067.00
2001-02	16	53	34	11,903.00
2002-03	15	59	21	19,080.00
Total	**110**	**288**	**106**	**$80,048.00**

Dangerous Goods

The Dangerous Goods Section administers programs for the transportation of dangerous goods, petroleum storage, contaminated sites, hazardous waste and emergency response, to:

- Co-ordinate development of policies and procedures and maintain policy/procedure manuals,
- Co-ordinate and lead Teams in each program,
- Provide guidance, co-ordinate training, and ensure consistent program delivery across Regions,
- Provide technical expertise, leadership and information to government, clients, and general public,
- Processing of hazardous waste transport and facility licences.

The *Dangerous Goods Handling and Transportation Regulation* was enacted, replacing its predecessor, in effect since 1985. Consequential amendments were also made to three other regulations. These changes reflect Manitoba's commitment to a harmonised regulatory approach to dangerous goods and hazardous waste management with the other provinces and the Federal government.

Petroleum Storage

The implementation of the *Storage and Handling of Petroleum Products and Allied Products Regulation* began. Implementation of new initiatives, such as licensing petroleum technicians and permitting existing storage tanks, continued. A Petroleum Technician Training Course has been reactivated through Red River College to facilitate the requirements of the Regulation.

Contaminated/Impacted Sites

Work continued on the redevelopment of policies/procedures to guide the management of contaminated/impacted sites.

All identified contaminated sites with contamination greater than lowest applicable guideline values, including those not designated as Contaminated Sites, are tracked to ensure public safety and health and environmental protection. Sites that threaten human health and/or the environment are designated.

Approximately 1,930 sites are tracked in Contaminated Sites Database, nine of which are designated as Contaminated under ***The Contaminated Sites Remediation Act***.

Hazardous Waste Program

473 hazardous waste generators were registered in the past year. There are currently a total of approximately 7650 registered generators in the Manitoba Conservation database. Approximately 14,800 hazardous waste transport manifests were processed in fiscal year 2002-03. Seven hazardous waste transport licenses were processed, as were five Eco-centre/waste oil depot licences and seven used oil burner licences.

Emergency Response Team

The Team received 507 calls through the Emergency Response 24-hour line and of these 369 environmental accidents were handled by the department.

All ERT members, including regional designates, were trained to NFPA 472 Awareness Level Hazardous Materials Response and to NFPA 472 Operations Level Hazardous Materials Response.

On May 2nd, 2002 at approximately 4:12 P.M. a CN freight train collided with a semi-trailer and derailed near Firdale, Manitoba. Two engines and 21 freight cars were involved, including, four tank cars of benzene / dicyclopentadiene, one tank car of hexene, 11 hopper cars of plastic pellets, two cars of granular fertiliser, one car of glycol, and two empty box cars. A catastrophic release of the hexene and benzene cars resulted in a massive fire that engulfed the other derailed cars. Concerns about the release of toxic by-products of this combustion resulted in the evacuation of approximately 170 local residents and the establishment of a secure perimeter around the site of at least two miles.

Manitoba Conservation's CL-215 water bombers and ground based fire operations were able to extinguish the fire on May 6th. The Emergency Response Team worked with the Office of the Fire Commissioner, Manitoba EMO, the RCMP, CN Rail, and local Authorities to manage the incident and provide on site command and control for the duration of emergency operations.

On-going evaluation of environmental contamination, site remediation, and monitoring has been overseen by Manitoba Conservation's contaminated sites program.

Table RO.2
Environmental Accidents

Total number of calls received	507
Total number of accidents reported	369
Breakdown by accident type:	
Transport-related	75
Spills during product handling	70
Equipment failure	127
Miscellaneous	97
Breakdown by dangerous goods classification (where applicable)	
Class 1 (Explosives)	2
Class 2 (Compressed Gases)	62
Class 3 (Flammable Liquids)	132
Class 4 (Flammable Solids)	1
Class 5 (Oxidisers and Organic Peroxides)	2
Class 6.1 (Poisonous Substances)	1
Class 6.2 (Infectious Substances)	0
Class 7 (Radioactive Materials)	2
Class 8 (Corrosive Substances)	16
Class 9 (Miscellaneous Substances)	24

Public Health Program

The Department conducts food service inspection in co-operation with Manitoba Health, to reduce the risk of injury or disease from food consumption. Staff respond to serious foodborne illness outbreaks and are integral to the disease management team. Foodsafe training courses are presented to the food service industry. Staff administer part of ***The Non-Smokers Health Protection Act*** in food-service facilities as part of inspection.

Onsite Waste Management

Review of the private sewage disposal program was completed, and a number of changes were proposed to the *Onsite Wastewater Management Regulation*, which will play a significant role in Manitoba's water strategy initiative. Sewage field failures continue to be problematic in districts with heavy clay soils such as the Red River Valley. The new Regulation will improve onsite sewage management, especially in these areas. An Onsite Wastewater Management System Installer's course is facilitated through Red River College.

Orphaned and Abandoned Mine Site Program

In support of Manitoba Industry, Trade and Mines' initiative to address safety concerns with five orphaned/abandoned mines, Manitoba Conservation initiated site-specific human health and environmental risk assessments at two of these sites.

The Lynn Lake risk assessment study was initiated in September 2001 and completed in April 2003. The study concluded the following:

- although metals are present in the town, the levels are not high enough to be a health concern for people who spend a lifetime in Lynn Lake;
- there are local impacts to the environment from the East Tailings Management Area; and
- these impacts do not extend into the regional area and do not significantly affect regional populations of fish, plants and animals.

A hydrogeological/geochemical study of the Sherridon Mine tailings impoundment at Cold Lake/Sherridon was completed in March 2003. The objectives of the study were:

- to quantify the extent of sulphide oxidation and acid neutralisation and metal attenuation reactions;

- establish current and future loadings of metals and acid from the tailings; and
- measure the release of metals to Camp and Cold Lake.
- The Sherridon study concluded the following:
    - the high sulphide content remaining in the tailings will release heavy metals and acid for decades to centuries;
    - localised zones within Camp Lake show high concentrations of metals with increasing depth; and
    - Cold Lake receives very high sulphate, metal and acid loading from Camp Lake.

The data obtained from the hydrogeological/geochemical will be applied in the Cold Lake/Sherridon risk assessment that was initiated in November 2002. This risk assessment will be completed by April 2004.

Enforcement

Enforcement policy/procedure provides a consistent approach, with emphasis on ensuring compliance with legislation. In addition to the summary below, a detailed report of enforcement activities is available in Public Registries throughout the Province and on the Department's homepage at http://www.gov.mb.ca/conservation.

Table RO.3
Environmental Sector Enforcement

Legislation	Prosecutions	*Warnings*	Orders	Fines($)
The Dangerous Goods Handling and Transportation Act	117	53	14	30,938
The Environment Act	46	122	20	29,080
The Public Health Act	1	49	26	300
Municipal By-laws		6		
Total	**164**	**230**	**60**	**60,518**

Table RO.4
Enforcement, by Act/Regulation

Legislation	Prosecutions	Fines ($)
Dangerous Goods Handling & Transportation Act	1	300
Waste Disposal Grounds Regulation	3	4,250
Litter Regulation	14	1,638
Storage and Handling of Petroleum Products and Allied Products Regulation	2	150
Transportation of Dangerous Goods Regulation	115	30,478
Burning of Crop Residue and Non-Crop Regulation	1	1,800
Private Sewage Disposal Regulation	6	1,536
Livestock Manure and Mortalities Management Regulation	15	19,080
Peat Smoke Control Regulation	6	986
Food and Food Handling Regulation	1	300

Regional Support Services

The section expanded and improved the Operations Division intranet site with additional reference manuals and expanded links to legislation and other program areas. A password secure area was developed for sensitive information.

Fisheries and Wildlife program branches were assisted with legislative review and development regarding illegal fish marketing and wildlife disease and baiting concerns. A new protocol was developed with Justice and the R.C.M.P. to keep involvement in federal firearm licencing legislation at a minimum.

Licencing of hunting guides has remained constant over the past three years with only minor variations in numbers issued. Licenses were issued to 1,479 guides in 2002/03.

Headquarters staff hosted the 2002 conference of the Canadian Natural Resource Law Enforcement Chiefs Association, with provincial, territorial and federal resource agency heads attending from all Canadian jurisdictions.

Natural Resource Officer peer-trainers continue to provide high quality, cost effective training to the Department's resource officers, who in turn deliver programs in a professional manner to the public. Training and annual re-certification in firearms was provided to 123 Natural Resource Officers. In order to meet work commitments, Central Training was not held in 2002/03. Thirty-seven new Park Patrol Officers were recruited from across Canada and were certified to Department standards over 8 days in hospitality, tactical communication, defensive tactics, firearm use, legislation and administrative forms, before being hired and assigned to various parks for 17 weeks of employment. Twenty-nine Assistant Resource Officers received refresher training in Tactical Shotgun, Baton deployment and use, and Officer Safety, including Unknown Risk and High Risk Vehicle Stops/Arrests. Sixteen new ARO's were given initial certification in all of the above areas. A total of 80 Natural Resource Officers received training either in Park Management, Leadership, Advanced Tactical Driving, or Wildfire Investigation. Three Natural Resource Officer Recruits were given a two-week firearm qualification course.

Tables RO.5 to RO.9 summarise the resource-law compliance activity of the department's full-time and seasonal Resource Officer service.

Table RO.5

Common Violations under *The Provincial Parks Act*

Offence	**Prosecutions**	***Warnings***	**Total Offences**	**Evictions**
Cause Disturbance	62	225	287	295
Unlawful Vehicle Operation	18	26	44	1
Have Liquor When Prohibited	28	11	39	59
Damage Park Property	12	14	26	1
Possess Fireworks	12	7	19	3
Fail to Control Animal	5	8	13	0
Pet Off Leash/On Beach	5	11	16	0
Have Fire Without Permit	8	4	12	0
Fail To Maintain Campsite	8	4	12	0
Disobey Officer or Sign	9	2	11	2
Other	28	39	67	11
Total	**195**	**351**	**846**	**372**

Table RO.6
Common Violations under *The Wildlife Act*

Offence	Prosecutions	Warnings	Total Offences
Loaded Firearm in Vehicle	39	3	42
Hunt on Private Land Without Permission	33	4	37
Hunt Without Licence	16	8	24
Hunt or Discharge Firearm From Road	16	0	16
Fail to Notch Tag	11	3	14
Fail to Wear Orange	11	2	13
Illegal Use of Bait	7	5	12
Illegal Vehicle Use for Hunting	9	3	12
Abandon/Waste Game	7	4	11
Possess Illegally Taken Wildlife	9	0	9
Nightlighting	8	0	8
Other	47	53	100
Total	**213**	**85**	**298**

Table RO.7
Common Violations under *Fisheries Act* and *Freshwater Fish Marketing Act* (Canada), and *The Fisheries Act* (Manitoba)

Offence	Prosecutions	Warnings	Total Offences
Use Barbed Hook	261	32	293
Fail to Carry or Produce Licence	27	76	103
Exceed Daily or Possession Limit	63	25	88
Fish Without Licence	36	28	64
Use Too Many Lines or Hooks	39	1	40
Possess Unidentifiable Fish	13	23	36
Violate Condition of Licence	2	23	25
Improperly Marked Nets	10	14	24
Transport Fish Without Loadslip	9	15	24
Live Bait Infractions	15	2	17
Fish During Closed Time	4	8	12
Leave or Deposit Decayed Fish on a Shore or in a Net	7	5	12
Fail To Remove Fishing Gear	3	7	10
Obstruct Channel with Fishing Gear	4	6	10
Other	44	80	124
Total	**537**	**345**	**882**

Table RO.8
Comparison of Wildlife, Fisheries, Parks and Migratory Birds Prosecutions 1993-94 to 2002-03

Fiscal Year	Wildlife	Fisheries*	Parks	Migratory Birds
1993-94	874	898	253	18
1994-95	640	1,033	142	85
1995-96	395	741	185	18
1996-97	441	976	173	26
1997-98	421	846	171	9
1998-99	278	965	248	6
1999-00	337	833	219	36
2000-01	371	610	203	8
2001-02	379	674	227	8
2002-03	213	537	195	9

*Includes all Fisheries Acts and Regulations found in Table RO.3

Table RO.9
Record of Violations Concluded

Acts	Prosecutions	% Convicted	Warnings	Total Offences
Crown Lands	12	75	34	46
Forest	13	94	20	33
Fisheries (Canada)	486	68	196	682
Fisheries (Manitoba)	90	78	149	239
Highway Traffic	63	86	66	129
Liquor Control	225	94	38	263
Migratory Birds	10	90	3	13
Off Road Vehicle	23	100	14	37
Provincial Parks	189	85	351	540
Wildfires	14	93	37	51
Wildlife	413	59	85	498
Water Rights	3	66	38	41
Total	1,541		1,031	2,572

Total Fines: $183,733.00 and Costs: $47,425.00 for 2002-03

Hunter and Firearm Safety Training

Manitoba Wildlife Federation administers and delivers the Hunter and Firearm Safety Training Program. About 250 active instructors graduated 2,191 students, the highest numbers in seven years.

Since the program began in 1964, a total of 138,252 students have been trained (Table RO.10). Table RO.11 shows firearm incident statistics, by five-year average since 1964. Table RO.12 provides statistics on firearm incidents and fatalities over the last 10 years. (*Non-hunting incidents* refer to incidents in the home, children playing with firearms, and similar incidents).

Table RO.10
Hunter and Firearm Safety Program 1992-2002

Year	Students	Total to Date	Instructors Certified
1992	2,651	116,881	19
1993	2,685	119,566	41
1994	2,256	121,822	45
1995	2,381	124,203	18
1996	2,115	126,318	11
1997	2,101	128,419	8
1998	1,807	130,226	24
1999	2,068	132,006	15
2000	2,079	134,085	5
2001	1,976	136,061	4
2002	2191	138,252	7

Table RO.11
Firearm Accidents, 1964-98, 5-Year Averages

1964-68	64
1969-73	56
1974-78	54
1979-83	43
1984-88	26
1989-93	20
1994-98	9

Table RO.12
Firearm Accidents 1992-2002

Year	Accidents			Fatalities		
	Hunting	Non-Hunting	Total	Hunting	Non-Hunting	Total
1992	12	9	21	1	0	1
1993	5	8	13	0	0	0
1994	4	5	9	1	1	2
1995	9	6	15	0	0	0
1996	6	2	8	1	0	1
1997	2	6	8	0	2	2
1998	4	2	6	1	0	1
1999	10	5	15	3	1	4
2000	3	0	3	0	0	0
2001	6	0	6	3	0	3
2002	2	0	2	1	0	1

Hunter-Killed Livestock Compensation

The Program compensates livestock owners for animals deemed accidentally shot by licensed hunters during an open big game season. Claims are investigated by Natural Resource Officers and occasionally by the RCMP. This year, five claims qualified for compensation totalling $5,715.70. Program activity for the past ten years is illustrated in Table RO.13.

Table RO.13

Hunter-Killed Livestock Compensation 1993-94 to 2002-03

Year Paid	Claims	Claims Paid	Total Paid	Average
1993-94	3	3	2,570.00	857
1994-95	9	7	11,850.00	1,693
1995-96	3	2	4,265.00	2,132
1996-97	4	4	9,800.00	2,450
1997-98	2	2	2,250.00	1,125
1998-99	7	6	9,532.55	1,589
1999-00	9	6	5,670.00	945
2000-01	7	4	4,120.00	1,030
2001-02	6	5	5,033.65	1,007
2002-03	9	5	5,715.70	1,143

Problem Wildlife Complaints

Beaver complaints were down 35% from last year, partly due to the introduction of an enhanced compensation program to assist municipalities to target problem areas during the winter. On the other hand, Black Bear occurrences rose 35% over last year creating significant control challenges in transitional areas between forested lands and urban or agricultural development. Complaints of big game damage were down significantly for the second consecutive year, which can be attributed to population reductions, minimal snow depths in some areas, and an effective crop compensation program. A summary of occurrences by region is presented in Table RO.14.

Table RO.14

Problem Wildlife Occurrences

	Region							
Species	**NE**	**NW**	**E**	**I**	**W**	**RR**	**Total**	**% of Total**
Beaver	5	7	47	47	44	47	197	5
Black Bear	134	143	820	351	236	90	1774	40
Polar Bear	208	0	0	0	0	0	208	5
Big Game	2	2	6	62	195	88	355	8
Wolf	47	10	19	19	54	13	162	3
Migratory Birds	9	17	6	140	163	52	387	9
Other	12	24	125	328	523	323	1335	30
Total	417	203	1023	947	1215	613	4418	100

Special Investigations Unit

Regional Investigators assisted various districts with complex investigations primarily related to illegal harvest and use of fish and wildlife. One major investigation conducted and a number of smaller investigations. Two unit members trained to the wildfire investigation standards. The vacant Investigator position for the Eastern Region was filled in October.

Turn-in-Poachers and Report Forest Fires Line (T.I.P.)

The toll-free telephone service (1-800-782-0076) which is aimed at reducing the illegal harvest of fish and wildlife received 399 calls resulting in 30 prosecutions and 8 warnings. The toll-free area was extended from Manitoba only to Canada wide. In addition, the toll-free line received calls reporting 86 forest fires.

Table RO.15
T.I.P. Calls by Region

Region	Number of Calls					Number of Charges			
	Fish	Wildlife	Other	Fire	Total	Fish	Wildlife	Other	Total
Red River	13	74	2	3	92	1	13	0	14
Interlake	28	77	2	4	111	5	3	0	8
Western	18	95	2	9	124	2	4	0	6
Eastern	6	67	2	36	111	2	0	0	2
Northwest	4	7	0	19	27	0	0	0	0
Northeast	0	2	0	18	20		0	0	0
Total	69	322	8	86	485	10	20	0	30

Table RO.16
T.I.P. Calls by Year 1994-95 to 2002-03

	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03
Calls Received	974	904	714	640	695	758	568	569	485
For Information	103	91	41	39	24	28	23	18	31
Calls Actioned	500	296	316	302	298	321	204	230	218
Prosecutions	127	156	68	74	74	70	59	40	30
Warnings	22	14	11	16	12	23	37	12	8

Wildfire Investigation

Fire investigators investigated 60 man caused fires resulting in six charges, four warnings and support for a number of chargeback fires. Incidence of young offenders involved in fire starts is a serious concern in some locations.

Canine Program

Conservation detector dog "Duke" was retired after six years of service. Four months of training with Winnipeg Police Service certified our new detector dog "Jake", a Belgian Malanois. Canine Unit was less active due to four months of training. Continued public education program in schools and public meetings. Assisted local police and RCMP detachments with a variety of duties along with Resource duties through the fall and winter.

Table RO.17
12.3(a) Headquarters Operations

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	2,596.7	50.5	2,568.6	28.1	
Other Expenditures	2,361.1		1,625.6	735.5	
Problem Wildlife Control	204.2		240.6	(36.4)	
Total Other Expenditures	2,565.3		1,866.2	699.1	

Northwest Region

The Northwest Region administers programs and services for the following areas: Crown lands, Provincial Parks, Environmental Stewardship, wildlife, fisheries, forestry, water resources, public health, and wildfire protection. This includes development, delivery, and evaluation of programs and services, and inspection, compliance, monitoring, and enforcement of environment, resources, and health legislation. The region has also developed an Intranet information regional web page that includes a map and locations of our services in the Northwest Region.

Programs and services are provided by a multi-disciplined full-time and seasonal staff working from a Regional Office in The Pas, and District Offices at The Pas, Cranberry Portage, Flin Flon, Grand Rapids, and Snow Lake, and Sub-District Offices at Sherridon, Moose Lake, and Cormorant.

Enforcement

Natural Resource Officers conducted patrols to ensure compliance with the various Acts and Regulations. This resulted in 172 enforcement actions (107 charges, 64 warnings and 1 eviction). Officers responded to 390 Occurrence Reports, of which 203 were problem wildlife, 132 regulatory and 55 non-regulatory in nature.

Officers checked 456 licensed hunters, 133 subsistence hunters, 3009 anglers, 666 commercial fisher nets, and 106 domestic fisher nets. Staff conducted 102 timber inspections on Tolko harvest areas.

Engineering/Water Resources

Pumping Operations to remove excess surface water in the Pasquia Land Project in the RM of Kelsey were limited to 53.0 hours. This was due to below normal snow levels and dry soil conditions in the spring. Pumping operations began April 19 and was completed by May 16. Minimal pumping occurred throughout the rest of the season.

Seeding was completed throughout the Carrot Valley by the last week of May. No significant precipitation until July influenced crop yields. Hay yields were 50-60% of average. Significant rainfall through August and September delayed the harvest and affected grain crop grades, however all crops were harvested before winter. Yields on most crops were average.

Provincial waterway and maintenance programs for our regional drainage systems near The Pas were completed by mid-October. Approximately 5 miles of drain were re-sloped and cleaned out including parts of Big Lake/Pasquia Lake Drains, Drain 0 and the Pasquia River. Approximately 5 miles of spoil bank were also leveled. Weed and brush control consisted of 1023 hours of mechanical mowing of drains, dykes, and right-of-ways. Two new 300 hp John Deere diesel engines and two new Johnson Gear angle drives were installed at Mile 9 pumphouse. Due to low water conditions in the fall these engines have not yet had final testing. This will be done in the spring as soon as ice and water conditions allow.

This year 1 Water Rights Licence, 1 Application to Divert and Use Water, 3 Licenses to Construct Drainage Works and 1 Application to Install Culverts were issued. As well various surveys were undertaken for the R. M. of Kelsey to resolve drainage and land owner issues.

Most major lake levels dropped significantly during the summer and remain on the lower end of the desirable range. Flows on the Saskatchewan River have fallen late in the year to below the lower decile condition, however fluctuations will continue due to varying outflows from hydro-electric stations in Saskatchewan.

Environment

Projects were completed in the following areas:

- Developed plan for completion in 2003 the co-location initiative for the integration of the former Environment section in The Pas Regional Office.
- Manitoba Conservation ordered that an Engineering Review be completed on The Pas Water Treatment Plant. Subsequent to that review, the plan upgrades identified ($2.0 M) has now been completed.
- Due to public concerns on air emissions a Flin Flon Garden Study was initiated and completed. The purpose of the study was to determine levels of heavy metals in garden vegetables and in the soil in Flin Flon and assess the associated health and environmental risks. The results were presented to the community during a public meeting on May 5th, 2003.
- Carried out specific sampling program on Schist Lake, Lake Athapap and Cuprus Sewage Lagoon. Established a Schist Lake Working Group to involve stakeholders in the exchange of information to assist in the review of water quality issues for Schist Lake.
- Implemented mandatory attendants and gates at all Class 3 Waste Disposal Grounds in the region to improve management of these facilities.
- Participated in the formulation of the Orphaned Mine Site Program for sites in the Northwest Region (Sherridon/Don Jon Mine/Snow Lake). A TAC Committee has been established to work with consultants to provide direction and receive program reports on the Human Health and Environmental Risk Assessment currently underway on the Sherridon Mine Site. Several public meetings were held in Sherridon concerning this study.

Forestry

Regional staff worked closely with Tolko and Forestry Branch staff to implement the new Chemawawin Forestry Partnership in the Interlake Section of the Northwest Region.

Hardwood auctions and direct awards to First Nation Communities have been carried out resulting in the harvest of about 20,000 m^3 of aspen in 2002. Further auctions and forestry opportunities for small operators are being examined for the coming year.

Forestry technical staff has worked with local Quota Holders to meet their timber needs while a deferral is in place on the planned operating area pending the completion of a caribou study.

Fisheries

- Completed annual fish stock assessment on Cedar Lake.
- Staff are currently working with the Kississing Lake Management Committee to develop a new management plan for the multi-use fishery on Lake Kississing. Department and regional staff responded appropriately to protect this fishery which had experienced recent domestic treaty netting activity.
- Coordinate a creel survey on Cormorant Lake in conjunction with Cormorant Resource Management Board.
- Participated in meetings with the Saskatchewan River Sturgeon Management Board. The SRSMB hired a consultant to facilitate and provide staff services for the development of a ten year and longer recovery plan for lake sturgeon in the Saskatchewan River.
- An area user committee, Rocky Creek Fisheries Committee was formed to review water management objectives in the Reader/Root eco-system. The committee in the process of securing funding for a proposed study of the area and protect the fishery and marsh areas. A University student has been hired to conduct this study in 2003.
- Staff are currently working with the Snow Lake Resource Enhancement Group on the Weskusko Lake fishery resource.

Lands

Proposed road accessible cottage subdivisions in the Flin Flon, The Pas, Cranberry Portage and Grand Rapids area have been submitted for provincial approval. Work continues in rehabilitating and dismantling federal wharves in a number of locations in the region. Work permit issuance has been very active in all districts throughout the past year. Ongoing inspections on numerous land uses indicate Manitobans are utilizing Crown land with care. Both recreational and commercial resource users are taking environmental issues into account in their use of Crown land.

Parks

New park signs were developed for Grass River Provincial Park. Interpretive signs for the area's Woodland Caribou were produced for Grass River. Discovery Channel's Great Canadian Rivers television series featured the Grass River.

Fifteen new campsites were developed at Gyles campground in Grass River Provincial Park to meet increased demand for the 2003 season.

Fire Program

Last winter snowfall amounts varied throughout the region but were still below normal in most areas causing low water levels. The Region's first fire was human-caused and occurred on May 9th. Total fires for the season was 76, of which 39 were human-caused and 37 were caused by lightning.

As a result of investigations on the fires traced to human activity, two non-residents were convicted and paid fines of $360.00 each. Two other fires were investigated with significant effort, however there was not enough evidence to support a charge.

Total hectares burned for the season was 581.6.

Table RO.18
12.3(b) Northwest Region

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	2,201.4	46.15	2,282.1	(80.7)	
Total Other Expenditures	765.8		776.4	(10.6)	

Northeast Region

The Northeast Region administers programs and services for the following areas: Crown lands, Provincial Parks, Environmental Stewardship, wildlife, fisheries, forestry, public health, and wildfire protection. This includes development, delivery and evaluation of programs and services, and inspection, compliance monitoring, and enforcement of environment, resources and health legislation. This is done by multi-disciplined full-time and seasonal staff working from a Regional Office in Thompson, District offices in Churchill, Gillam, Thompson, Wabowden, Lynn Lake, Leaf Rapids, Norway House, Island Lake, and Gods Narrows, and sub-District offices in Split Lake, Nelson House, Pukatawagan, South Indian Lake, Cross Lake, and Oxford House.

The Region continued support of, and participation on, Nelson House, Split Lake, York Factory, and Norway House Resource Management Boards, Nelson River Sturgeon Co-Management Board, Beverly and Qamanirjuaq Caribou Management Board, Wapusk National Park Management Board, and Cross Lake Resource Management Task Force.

The Integrated Resource Management Team met regularly to evaluate land and resource-use applications.

Enforcement

Natural Resource Officers checked 1,996 anglers, 724 hunters (497 big game, 137 migratory bird, 90 upland gamebird), and 201 commercial fishermen. Staff inspected timber operations and most remote lodges, outcamps and tent-camp sites, and monitored campers and day-users in Parks, resulting in 47 Prosecutions, 82 Warnings and 7 Evictions. 395 Timber Permits, 210 Work Permits, 92 Burning Permits, and 28 General Fishing Permits were issued through District Offices.

Environment Officers/Public Health Inspectors inspected rental accommodations, commercial food establishments, water and wastewater facilities, waste disposal grounds and contaminated soil remediation sites. 36 Warnings and 9 Orders were issued. Assistance was also provided to the Medical Officer of Health's office in issuing and administering 5 Boil Water Advisories.

Fisheries

Most commercial fisheries performed well, with the exception of Southern Indian Lake. Whitefish production from Southern Indian dropped below the long term average. The Playgreen Lake fishery continues to be dominated by high value walleye production. Fish quality issues (spoilage) arose along the Nelson River during the summer, which was still unusually warm when the fishery reopened. These problems may have been complicated by the presence of smelt. This has previously been recognised as a possible impact of the introduction of smelt.

Setting Lake walleye stocks continued to show signs of recovery. This recovery depends in part on the support of the local community (Wabowden) to protect a local spawning run.

The Nelson River Sturgeon Co-Management Board continues to stock sturgeon fingerlings as a rehabilitation tool. This year's spawn collection and stocked were both highly publicised. New methods for collecting spawn were tested and offer considerable potential for future years.

Forestry

Tolko Manitoba continued to be the primary timber company operating in the Northeast Region. Regional and company staff worked closely on the implementation of new approaches to timber harvesting, including the introduction of a Flexible Utilisation Guideline and Stand Selection Criteria. There were also five active Timber Sales in the Northeast Region.

There were 3,800,000 trees planted by Tolko and Manitoba Conservation in the Northeast Region in 2002. The number of hectare sites prepared for tree planting and natural regeneration by Tolko and Manitoba Conservation was 2,800 ha.

Manitoba Conservation staff continued to work with First Nation Communities in accessing opportunities and economic benefits from timber harvesting activities.

Fire Management

A late spring brought a slow start to the fire season in the Northeast Region with the first fire occurring on May 13th. However, the region saw 279 wildfires consume an estimated 61,000 hectares of woodland during the 2002 season. It was an average fire season with 10 fewer fires than last year. Losses of merchantable timber to fire were low with 61 fires consuming an estimated 395 hectares of forest in the Red Zone. One fire, the Radar Lake Fire, occurred in a Tolko company cut block and was responsible for 337 hectares of the total. An estimated 2000 m^3 of standing and processed timber was destroyed. Aggressive action on the fire by regional personnel kept fire losses to a minimum.

The majority of forest fires occurred in the Green Zone; 172 fires consumed approximately 40,400 hectares of forested land. Suppression action was taken on 157 of these fires with 15 being left to burn. The remainder of the fires occurred in the Observation Zone and did not receive any suppression. Fifty-four fires consumed approximately 20,000 hectares in the Observation Zone.

Once again, fire suppression training to the national standard (CIFFC) level occurred in the spring to ensure the region's Initial Attack personnel were certified to a national training level. This training allows Manitoba's fire personnel to be exported to other provinces and the United States for fire suppression. The 2002 fire season saw two out-of-province exchanges where suppression personnel were exported to Alberta in June and to Oregon in August. Cool, wet weather at the end of August brought the fire season to an early close.

Provincial Parks

New park signs were developed for the Pisew Falls to Kwasitchewan Falls hiking trail.

Forty-two campsites at Paint Lake were enlarged and leveled to accommodate modern units. Work began on a new disabled accessible campsite at Paint Lake.

Design work for the new Paint Lake water treatment system continued.

Wildlife

A new system and licence fee structure for non-resident barren-ground caribou licenses was developed following consultation with lodge operators and First Nation communities. The changes will enhance the ability for lodges and First Nation communities to market non-resident caribou hunts. The number of non-resident caribou licenses remained unchanged at 195. Allocations for non-resident black bear and moose licenses also remained unchanged at 594 and 158 respectively.

In partnership with the Nischawayshik Cree Nation at Nelson House and Manitoba Hydro, staff continued to participate in a monitoring study for the Wapisu Caribou Herd. The objective for the study is to identify areas of critical habitat for this herd.

The Polar Bear Alert Program saw the second busiest year on record despite a normal freeze-up of Hudson Bay in mid-November. There were a total of 209 occurrences recorded and 121 bears handled by the Program in summer/fall, 2002. The same trends as seen in recent years continued in 2002 in terms of higher number of bears being handled and an earlier start to the "problem season" compared to long term averages.

The 2002 Thompson Fur Table was a success, hosting 258 trappers from outlying communities. Fur prices for marten, lynx, and fox increased resulting in better financial returns to the trappers. Five buyers attended the Fur Table and purchased $409,300.00 of fur.

Lands

Mineral exploration activities regulated by Work Permits continued across much of the Region in the winter.

Geophysics and drilling activities for base metals and diamonds occurred in Lynn Lake, Leaf Rapids, Wabowden, Thompson, Gillam, Island Lake and Gods Lake Narrows Districts'.

Staff worked closely with the Department of Transportation and Government Services to address problems with winter roads. Environment Licences were issued and monitored for two new winter roads. Winter roads serve 16 communities.

The Treaty Land Entitlement process continued. Thirteen First Nations included in the *TLE Framework Agreement* are in the Region; eight have signed TLE Agreements and are making land selections.

Environment & Public Health

Staff participated in the Site Specific Environmental and Human Health Risk Assessment for Lynn Lake, a comprehensive study to examine the risks of air and water emissions from East Tailings Management Area, formerly operated by Sherritt-Gordon Mines Ltd. (1953-1976). The final report is expected in April 2003.

Staff chaired and participated on the Northern Waste Committee (NWC) to assist in addressing solid waste management in the North. NWC comprises stakeholder groups and was created in response to the *Final Report of the Manitoba Regional Waste Management Task Force: Action Plan and Recommendations* (December 1999). The Committee examined issues and obstacles that hinder regionalized waste management planning. An interim report has been drafted and stakeholder consultations are planned for the fall of 2003.

Table RO.19

12.3(c) Northeast Region

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	2,264.3	50.88	2,530.5	(266.2)	
Total Other Expenditures	960.0		969.3	(9.3)	

Interlake Region

The Interlake Region administers programs and services for the following areas; wildlife, fisheries, forestry, Crown lands, water management, Provincial Parks, Environmental Stewardship, and wildfire protection. This includes development, delivery and evaluation of programs and services, and inspection, compliance monitoring, and enforcement of environment, resources and health legislation. This is done by multi-disciplined full-time and seasonal staff working from a Regional Office in Gimli and District Offices in Ashern, Birds Hill, Grand Beach, Gypsumville, Hodgson, Lundar, Riverton, Selkirk, and Winnipeg Beach.

Enforcement

About 2,074 Occurrence Reports were received, of which 947 were about problem wildlife. The remainder, about 1127 calls, were for regulatory and non-regulatory issues in areas such as parks, fishing, hunting and crown lands.

939 enforcement actions resulted in 492 charges, 351 Warnings, and 96 evictions from Parks. 112 of the charges were under *The Manitoba Fisheries Regulation*, 99 were under ***The Liquor Control Act*** and 87 under ***The Provincial Parks Act***. The courts assessed approximately $75,000 in fines and costs.

Environment

Drinking water continued to be an issue in some communities where private water wells were contaminated by coliform bacteria. A regional drinking water officer was hired to administer the drinking water program for the Interlake Region. A Boil Water Advisory remained in effect for residents in Balmoral. A Boil Water Advisory was also issued for parts of East Selkirk. These communities continue to work towards resolving these problems.

Interlake Region continues to work with Municipalities on solid waste management, fostering closure of unacceptable waste disposal sites and developing proper sites or converting to waste transfer stations. Staff continue to work toward the closure of the last of the liquid waste pits in the region with construction of engineered sewage lagoons or other treatment facilities to properly treat sewage wastes.

Staff continued work with livestock producers to ensure compliance with Regulations. A new regulation is in place and an Environment Officer has been hired to concentrate on livestock issues.

Interlake Regional Environment staff monitored and inspected approximately 2400 sites including but not limited to gas stations, restaurants, public water supplies, private sewage systems, waste disposal sites and livestock facilities.

Fire Program

The Interlake Region had a total of 183 fires during the 2002 fire season. Of these, 3 were caused by lightning and 180 were human-caused, burning a total of 5,599ha. The majority of the fires actioned were in the Gypsumville district. Due to weather conditions, the fire season was approximately 4 weeks longer than average.

Camp Morton Provincial Park was used for a fire crew member training course that was held jointly with the Interlake and Eastern Regions involving approximately 40-50 staff.

Fisheries

The start of the Lake Winnipeg commercial fishing season was delayed until 80% of female pickerel had spawned. The recently re-established Lake Winnipeg Fisherman's Advisory Board convened twice during the year.

The 3" mesh fishery on Lake Manitoba was again confined to South Basin and operated from January 1 to February 28. The 3¾" mesh fishery in the North Basin was extended to March 31/03. An experimental 3" mesh fishery was conducted by 7 fishers in the North basin.

The Region continued integrating its fish habitat work with Fisheries and Oceans Canada and a large number of habitat issues were dealt with in the past year.

User participation continued on all commercial lakes, with fisher involvement in hatcheries and index fishing programs.

Chitek, Inland, Archies and Crab Lakes fry stocking programs continued to yield marketable volumes of pickerel to Waterhen Lake fishers.

Table RO.20

Commercial Fish Harvest, Interlake Region (kg round weight)

Lake Manitoba	**Pickerel**	**Sauger**	**Perch**
1999-00	311,200	62,820	83,860
2000-01	411,700	27,900	86,460
2001-02	263,640	15,460	445,280
2002-03	238,700	21,600	304,300
Lake Winnipeg	**Whitefish**	**Pickerel**	**Sauger**
1999-00	928,864	2,727,955	949,500
2000-01	1,360,000	3,614,500	845,500
2001-02	1,710,300	3,211,460	664,780
2002-03	1.597,700	3,212,700	739,000

The freeze-up on Lake Manitoba was very early and helped to maintain the production of pickerel and sauger. The perch season, in January and February, continued at a relatively high level.

The Lake Winnipeg Fishery continued to thrive, with high production for the fourth consecutive year.

Forestry

Timber harvest activity was up with operators getting a jump on the year with colder than normal temperatures for the early part of the winter season and surprisingly active markets despite continued depressed prices in the lumber sector. Outside markets were better than expected, with strong demand for softwood and hardwood, logs and pulp, from the United States (northern Minnesota and North Dakota) and for hardwood pulp from North Western Ontario. Local markets purchased at or near the normal volume of softwood pulp, and softwood and hardwood sawlog material readily changed hands despite continued uncertainty over the Softwood Lumber Agreement dispute with the U.S. Interest in hardwood from the Interlake is expected to increase as markets continue to develop locally within the province and from outside sources such as in Ontario and the northern U.S.

Table RO.21

Timber Harvest, Interlake Region (m^3)

	FMU40	FMU 41	FMU 43	FMU 45	TOLKO	PERMITS	TOTAL
Softwood	7,739	11,797	2,133	0	0	625	22,294
Hardwood	442	6,766	4,372	1,250	0	1,250	14,080
Total	8,181	18,563	6,505	1,250	0	1,875	36,374

Table RO.22

Forest Renewal, Interlake Region

Area Renewed (ha)	1998-99	1999-00	2000-01	2001-02	2002-03
Planted	460.0	362.9	311.4	137.4	116.8
Scarified	25.0	10.5	10.0	0.0	0
Trees planted	1,219,800	925,400	844,644	371,950	213,480
Site prepared* (ha)	248	255.3	88.0	0.0	0
Plantation area chemically released (ha)	194	0	36.7	270.0	0

*prepared for planting the following year.

Lands

Staff assessed about 135 applications for Crown Lands, including General Permits, Work Permits, Leases, sales, appeals, exchanges and Quarry Leases. The Region received 169 applications for Crown Quarry Permits, 1 new snowmobile trail proposal, 45 Resource-Based Tourism Facility applications, 20 policy and planning reviews, 163 private land subdivisions, 130 Water Rights License applications, 7 large livestock proposals, 65 Operational Land Use Code amendments, 15 municipal planning reviews/By-law Amendments and 3 ***Environment Act*** License proposals. Treaty Land Entitlement reviewed tentative land selections for Peguis First Nation. These numbers include land activities in Red River Region.

Provincial Parks

Grand Beach's 5 km bike path was completed and asphalted.

Beach Safety staff at Birds Hill, Grand Beach and Winnipeg Beach Parks estimate 878,000 people used these beaches during the season. Grand Beach accounts for 45% of the total, Birds Hill for 45% and Winnipeg Beach for 10% of the overall attendance.

Chitek Lake protected area is moving towards a Provincial Park status, as negotiations continue to be positive.

The Winnipeg Folk Festival at Birds Hill Park drew 38,000 patrons in 2002. The summer season brought over 25,000 campers to Birds Hill Park, and Hecla Provincial Park had more than 19,000 overnight campers.

100 numerous special events were hosted in Parks.

Water Management

130 Water Rights License applications were received and 24 drainage concerns or complaints were investigated. Municipalities were assisted with water management projects. 82 Water Right Licenses were issued, as were 29 Letters of Approval for drain cleanouts. Monthly meetings were held with 5 Water Management Associations to discuss drainage concerns, licensing, and proposed water management projects (Fisher, Western Interlake, Northeast Interlake, Southeast Interlake and Northwest Interlake).

Provincial Waterways (drains) were maintained and crossings repaired or replaced by staff or tendered contract. Dams were operated to regulate water levels within desirable range. Control structures were operated on Fish Lake Drain, Swan Lake Drain, St. Laurent Dam and Fairford River Dam. Meetings were held with Peguis First Nation to discuss options to alleviate chronic flooding on the reserve and a brushing program was initiated on the Fisher River.

Wildlife

Infrastructure at the Narcisse Snake Dens was upgraded and improved including construction of a new viewing platform, placement of protective fencing and improvements to the interpretive trail. This was a co-operative project involving Manitoba Conservation, Intergovernmental Affairs and the Narcisse Snake Advisory Committee. This site continues to attract thousands of visitors each spring to view the snakes emerging from the dens and begin their annual migration to summer range.

Hunter check stations were phased out in the Oak Hammock Marsh and Grants Lake Managed Hunting Areas to help improve hunter opportunities and reduce administration. The managed hunting program will continue including the requirement for signed landowner permission, a limit of 4 hunters per quarter section and 6 days per hunter. However, hunters will no longer be required to register at check stations.

The Chitek Lake Wood Bison herd located 80 km north-west of Gypsumville continues to grow and is now estimated at about 150 animals. This herd is expected to total about 400 animals in 2007 and is the most easterly population of free ranging Wood Bison in Canada.

Table RO.23

12.3(d) Interlake Region

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	3,367.8	70.63	3,370.8	(3.0)	
Total Other Expenditures	1,289.2		1,392.1	(102.9)	

Eastern Region

The Eastern Region administers programs and services for the following areas; Crown lands, Provincial Parks, Environmental Stewardship, wildlife, fisheries, forestry, public health, and wildfire protection. This includes development, delivery and evaluation of programs and services, and inspection, compliance monitoring, and enforcement of environment, resources and health legislation. This is done by multi-disciplined full-time and seasonal staff working from a Regional Office at Lac du Bonnet and District Offices at Beausejour, Bissett, Falcon Lake, Hadashville, Lac du Bonnet, Lake Winnipeg East, Pine Falls, Rennie, Seven Sisters, Sprague, Piney, and West Hawk Lake, and Sub-District Offices at Berens River and Little Grand Rapids.

Enforcement

Out of a total of 2,570 Occurrence Reports, 1,023 were problem wildlife (47 beaver, 820 black bear, 6 big game, 19 wolf, 6 migratory birds, 125 other), 815 were regulatory, and 732 were non-regulatory.

Natural Resource Officers checked 8,711 anglers, resulting in 229 charges and 127 Warnings. There were 2,362 hunters checked with 37 charges and 22 Warnings. There were 76 charges, 145 Warnings and 233 evictions under ***The Provincial Parks Act*** and Regulations.

Fisheries

A total of fifty-seven water bodies were stocked with 7,750,000 fish (19,590 brook trout fingerlings, 215,000 brown trout fingerlings, 105,375 lake trout fingerlings, 22,980 rainbow trout fingerlings, 3,000 sparr fingerlings, 16,000 splake fingerlings, 7,367,955 walleye fry and 100 adult perch.

One habitat site identified by the Brokenhead Restoration Committee biological study on the Brokenhead River was restored and another site is currently under review.

Work is nearing completion on the Little Black River walleye spawning enhancement site and stream bank remediation project. Little Black River First Nation in consultation with various agencies has directed this project.

Discussions continue with Sagkeeng First Nation towards the development of a joint sturgeon management plan for the Winnipeg River. The sturgeon monitoring program continued with 246 sturgeon tagged and eggs collected for sturgeon culture. Two thousand fry were provided to the University of Manitoba for habitat enhancement research.

Lake assessments were completed on Barren, Beresford, Cole, Elbow, Lac du Bonnet, Marijane, Moose, Periscope, Shoe and Whitemouth Lakes.

Forestry

There were 141 forest fires; 79 caused by lightning, 62 human-caused with 10,834 hectares burned.

Monitoring and reconciling Tembec's Annual Operating and Renewal Plans with their field operations continued to be a major activity.

The Region was responsible for planting 1.75 million seedlings and preparation of over one thousand hectares for forest renewal sites, primarily in the Southeast and secondarily in the Berens River area.

Regional staff continue to participate in the Manitoba Model Forest (MBMF) program. MBMF was created in l992 through a partnership agreement with interested groups looking to support innovative sustainable forest management programs. The focus of the MBMF is to bring forest stakeholders together to work towards a common understanding of ecosystem based processes and sustainable development. A regional staff person was seconded to MBMF on a half time basis to assist in the planning and development of the new five-year plan approved by Forestry Canada.

Provincial Parks

Falcon Lake ambulance service experienced another busy year, responding to 166 calls and transporting 63 people to hospital.

Park facility upgrading continued throughout the Region with completion of campground enhancements at Falcon Lake, the expansion of the Falcon Lake Office, initiation of construction of a lakefront boardwalk at Falcon Beach, completion of ten electrical campsites at Big Whiteshell, and completion of a campground enhancement project at Tulabi Falls in Nopiming. There were three new Whiteshell Provincial Park Entrance signs erected and trail development continued on the North and South Whiteshell trails, both part of the Trans-Canada Trail.

Wildlife

Two major stakeholder and First Nation co-operative management committees continue:

- Committee for Moose Management (CMM) provided a critical advisory function to the Department on forest access management and hunting closure criteria. Meetings with First Nations and stakeholders resulted in ongoing management moose conservation measures of closed hunting areas (to all people) for moose rehabilitation in traditionally used areas.
- Eastern Region Woodland Caribou Management Committee engaged in significant research and management initiatives involving the development of conservation strategies for Owl Lake range. New research being conducted in the northern part of the Region will assist development of conservation strategies for East Side planing initiative, First Nations, East Side Road and potential hydro corridor development.

Staff continue to service a full range of clientele, including First Nations, trappers, hunters, forest industry, non-governmental organizations, wildlife associations, communities, and individual requests. Several hundred requests from the public for information about wildlife, land and habitat issues were dealt with.

Environment/Public Health

The Eastern Region hired two Drinking Water Officers in February 2003 to administer the Drinking Water Program in the region.

Table RO.24
12.3(e) Eastern Region

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	3,327.3	72.72	3,425.1	(97.8)	
Total Other Expenditures	926.4		938.2	(11.8)	

Western Region

The Western Region administers programs and services for the following areas: Crown lands, Provincial Parks, Environmental Stewardship, wildlife, fisheries, forestry, public health, and wildfire protection. This includes development, delivery and evaluation of programs and services, and inspection, compliance monitoring, and enforcement of environment, resources and health legislation. This is done by multi-disciplined full-time and seasonal staff working from a Regional Office in Brandon, Subregional Offices in Dauphin and Swan River, Water Engineering offices in Neepawa and Minitonas, and District Offices at Brandon, Dauphin, Boissevain, Carberry, Grandview, Killarney, Mafeking, McCreary, Neepawa, Roblin, Shoal Lake, Swan River, Virden, and Winnipegosis.

Enforcement

Resource Officers continued to work with livestock producers to reduce the numbers of livestock injured or killed by wildlife.

Officers checked 4015 big game hunters, 413 migratory bird hunters, 4774 recreational anglers, 265 commercial fishers, 171 domestic fishers, 21 Treaty Indian fishers and 266 nets. The Region made 133 off-road vehicle checks.

There were 1690 Occurrence Reports: 707 for problem wildlife, 667 regulatory and 316 non-regulatory.

Wildlife checks resulted in Officers checking 2652 deer, 402 moose, 792 elk, 169 bear, 152 upland game bird and 160 waterfowl hunters. 57 lodges/outfitters, 59 trappers, 420 Treaty Indian hunters, 57 lodges/outfitters, 1 fur dealer, and 4 taxidermists/animal parts dealers were also checked.

Forestry checks resulted in Officers reviewing 110 timber sales/operations, 175 timber permits, 13 sawmills/planers, 40 load slips and 6 trespass operations.

Five fire investigations were conducted. Fire prevention patrols were conducted around communities to curb fire starts.

Three staff were certified in EMO search and rescue.

Fisheries

Lake Winnipegosis fishery production summer and winter seasons have not changed significantly, and the walleye fishery continues to be in a depressed state.

Watershed management and planning is becoming increasingly important with staff working with more than a dozen watershed boards, in addition to a number of Conservation Districts in the region.

Protection of habitat through environmental reviews of landuse proposals, funding applications, and maintenance activities adjacent to water, remains a major activity.

Fish stocking continues to be an integral part of fisheries management. Approximately 15,000,000 walleye fry and 500,000 trout fingerlings were stocked. Sturgeon stocking in the Assiniboine River has been successful with anglers reporting frequent catches. Index netting was completed on Dauphin, Rock and Pelican Lakes, and Lake of the Prairies, as was test netting on many smaller waterbodies. This annual activity updates the database and assists in evaluating management activities and effectiveness. There was no index netting conducted on Lake Winnipegosis in 2002. In some areas navigation was difficult due to low lake levels.

Exceptionally high harvest levels on Lake of the Prairies and Dauphin Lake resulted in a Conservation Closure being implemented for both lakes.

The Dauphin Lake Co-Management Working Group, comprised of members of the West Region Tribal Council and Manitoba Conservation, have been working on developing a plan to ensure the long term sustainability for the Dauphin Lake fishery.

Staff were active with local Fish Enhancement Groups in Swan River, Dauphin and Russell areas.

Forestry

70 Work Permits were issued for timber harvest on 205 harvest blocks and 20 work permits were issued for renewal related activity in the Mountain Forest Section. The Region planted 825,100 seedlings on 590 hectares of harvested forestland. There is a trend of fewer permits being issued for more harvest blocks in the Mountain Forest Section. This trend is largely due to extensive mitigation work completed between the forest industry and the IRMT sub-committee in Swan River. As well, two larger harvest areas were initiated (the root rot infestation harvest in the Porcupines and the fire salvage near Red Deer Lake).

Staff participated on technical committees for the following; establishment of protected areas in the Porcupine Provincial Forest, Swan Lake Basin Watershed Plan and the Valley River Watershed Board.

Staff played a key role in the development and implementation of chipperwood measurement procedures for the Chipperwood trial with Spruce Products Limited.

Forestry Operation staff completed establishment of forest renewal – site preparation trials to help address forest health and renewal issues in the root rot infestation.

A late, dry spring created a very busy fire season. One large fire (Fire 51) consumed 3800 ha. which resulted in some communities being evacuated.

Staff assisted the local loggers and haulers at their education week events.

Provincial Parks

Transient and seasonal camping numbers were generally consistent with 2001 and previous use. The exception was Asessippi where there was a dramatic 30% reduction in transient camping from 2001 to 2002. Use of the Park Reservation Service generally increased.

As part of the public input to the Duck Mountain Provincial Park Management Plan, water testing was conducted on Childs and Singush Lakes to establish baselines for various parameters of lake water quality.

Selected campsites at Sprucewoods, Rainbow Beach and Asessippi were converted to meet Manitoba Park standards for handicapped sites.

Regional staff participated in developing options for establishment of a protected area in the Porcupine Provincial Forest. Regional staff participated in the park designation process for the former Criddle Property, and a prairie addition to Rivers Park.

Staff worked actively with the local snowmobile associations, who are trying to get a system of trails in the Duck Mountains.

Water Management

Engineering staff continued work with provincial waterway, dam maintenance and repairs, as well as assisting with Water Rights issues.

Water Rights staff continued to undertake investigations, enforcement and licensing of drainage under ***The Water Rights Act***. Staff continue to work with Whitemud Watershed Conservation District following a successful drainage licensing pilot project.

Between April 2002 and March 2003, 174 applications (66 WWCD) were received of which 156 (50 WWCD) were issued. The region received 55 complaints, resulting in 21 enforcement notices, 10 ministerial orders (of which 4 were emergency orders) and 2 charges.

Staff participated in watershed planning with Oak Lake Aquifer Management Plan implementation, Assiniboine Delta Aquifer Management Plan, and a Department of Fisheries and Oceans (DFO) sponsored workshop dealing with issues in the Smith Creek Watershed. Water staff delivered presentations to two DFO workshops in Dauphin and Brandon.

Wildlife

The second and final year of Bears and Bees project in Ethelbert area was completed. Six outfitters installed 20 electric fences around chronic beeyard depredation sites. The nuisance bear harvest was significantly reduced and no fences were breached by bears.

Chronic Wasting Disease surveillance was conducted in the white-tailed deer population of the extreme west and the border area adjacent to North Dakota and Minnesota. 550 deer heads were collected from hunters at checkstations in Roblin, Russell, Birtle, Virden, Melita, Killarney, Boissevain and Manitoba.

The second year of Bovine TB management plan was implemented around Riding Mountain National Park. Twenty-eight barrier fences were installed around cattle producer hay yards at chronic elk depredation sites. Elk research continued, with 129 elk being captured by helicopter net-gun in the Park and monitored with radio collars to determine movements. In order to reduce the Riding Mountain elk herd to the target population of 2500, the winter hunter season was extended in February. An additional 160 elk were taken during the extended season for the total of 330 elk samples.

Douglas Marsh Important Bird Area Community Conservation Plan was finalised and a successful dedication ceremony was held on June 1, 2002 at the Douglas Marsh.

The Winter Beaver Program was successful and welcomed by rural municipalities and registered trappers.

The Coyote population remained high with a significant number of complaints received.

A new predator control program was initiated in co-operation with Manitoba Crop Insurance and the Manitoba Trappers Association to assist cattle producers. There were three chronic problem areas near Dauphin, Birtle and Neepawa areas.

Peregrine Falcons returned to the MacKenzie Seeds building in Brandon to nest for their eighth consecutive year. An additional male Peregrine Falcon was sited at the Brandon Mental Health Centre grounds throughout the summer. An additional nesting structure was installed at Shoal Lake to entice nesting by Peregrine Falcons sited in the area.

Wildlife impact assessments were completed on 180 timber harvest blocks and 41 contingency blocks identified in Louisiana-Pacific and Mountain Quota Holders 2003/04 Annual Operating Plans.

A technical report on wildlife populations and habitats was completed within the Swan Lake Watershed for consideration by the Round Table in the development of a management plan for the Swan Lake Basin.

A review of non-resident (non-Canadian) deer, moose and black bear license use by outfitters for 2002 was undertaken.

Recommendations on Crown land sale applications and land-use code change requests for agricultural purposes were developed to protect/maintain existing wildlife values.

Staff conducted regional grouse surveys.

Lands

Staff participated in the Western Region's final selection of lands for the Protected Areas Initiative (PAI) which was revised and submitted.

Crown land sale applications, general permits, Licensing Advisory Committee circulars and subdivision reviews continued throughout the year.

A final exchange of Crown and municipal lands was initiated in an effort to partially complete the Duck Mountain Provincial Forest expansion.

Staff worked with a local interest group and developed a proposal for funding under the Important Bird Area initiative, resulting in additional interpretative signage for Whitewater Lake (a heritage marsh recognized under the Important Birds Area Program).

Signage was developed and purchased for Brandon Hills Wildlife Management Area recreational trails.

Staff continued their involvement in Mixed-Grass Prairie Grazing Demonstration Project in co-operation with agencies including: Manitoba Habitat Heritage Corporation, Ducks Unlimited, Conservation Districts, and Manitoba Agriculture and Food, as well as several cattle producers. Co-ordinated through the Critical Wildlife Habitat Program, this project is aimed at promoting preservation and proper grazing management of mixed-grass prairie.

Preservation and enhancement of mixed-grass prairie in the Spruce Woods area continued through involvement with the Mixed-Grass Prairie Stewardship Program.

In co-operation with Manitoba Agriculture and Food, projects related to agriculture/wildlife compatibility were initiated in some wildlife management areas.

Continued involvement in the Southwest Regional Riparian Working Group. Initial comments for riparian grazing guidelines were submitted to the Riparian Health Council.

A pilot project was implemented with the Department of Highways and the Manitoba Habitat Heritage Corporation regarding mitigation of wetland habitat loss in association with highways construction.

Licensing/Waste Disposal

Proposed Environment Act Licenses were reviewed using risk-based management.

Further to the implementation of an agreement between the Town of Neepawa, Water Services and Springhill Farms, the Department established an interim arrangement to manage the liquid waste disposal until the construction of the liquid wastewater treatment facility has been upgraded.

Operation and maintenance of waste disposal grounds continues to improve. The rural municipalities of Odanah, Lansdowne, Langford and Minto are working towards establishing a regional landfill with the assistance of Manitoba Conservation.

Emergency Response

Staff were involved in several major emergency response incidents. These included the Firdale CN Rail derailment; the Newdale CN Rail derailment; the Brookdale pipeline explosion; the Virden oil spill; and vehicle accidents near Neepawa, Brandon, Virden.

A major acid spill occurred at the Mid-West Foods processing plant in Carberry, which resulted in the implementation of the local emergency disaster plan.

Public Health

Staff participated in swimming-beach monitoring program, and monitored lakes with blue-green algae advisories. Due to concern of water quality of several recreational lakes, additional monitoring will be carried out to determine the impact that livestock are having on these lakes.

Staff maintained a monitoring role over operation of public and semi-public water supplies. Several communities continue to have boil water orders, resulting in close monitoring by regional staff.

Continued delivery of Food Safe Program with Assiniboine Community College, producing over 200 graduates. Brandon Public Health staff successfully delivered Food Safe II at Assiniboine Community College for management and owners. Twenty-five students received the advance certificate.

Dangerous Goods Handling and Transportation

Spring and fall inspections were conducted on anhydrous ammonia transportation and handling vehicles. There was an increase in the number of accidents involving anhydrous ammonia, which will result in additional inspections during the spring and fall of 2003.

Two additional officers received certification as first responders for environmental accidents.

Environmental Livestock Program

The region assisted the Technical Review Committee in consideration of 20 livestock proposals. Issued 21 Permits to Construct manure storage facilities and inspected each site a minimum of three times. Conducted 86 annual inspections on existing manure storage facilities.

Enforcement of *The Livestock Manure and Mortalities Management Regulation* in Western Region resulted in 5 offence notices totalling $9000 in fines, 5 Director's Orders, and 2 Environment Officer's Orders.

Table RO.25
12.3(f) Western Region

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	5,155.5	108.25	5,339.1	(183.6)	
Total Other Expenditures	1,759.1		1,763.9	(4.8)	

Red River Region

The Red River Region is compromised primarily of urban and agricultural land uses. Although the region still contains some limited natural, undeveloped areas, the vast majority of the land base has been significantly altered by human occupation. As a result, the focus of the work undertaken by Red River Region staff is often somewhat different than the other regions in the Regional Operations Division.

Due to the type of terrain that makes up most of the region, and also due to the level of agricultural activity, maintenance of the provincial waterway network and processing of drainage licenses and enforcement of *The Livestock Manure and Mortalities Management Regulation* are priority programs in the region.

The Red River Region maintains offices and equipment yards at ten locations throughout the region. This was a new region formed as part of the departmental integration process, and significant progress was made in the past year in the staffing of vacant positions. A number of younger employees were added to the Red River Region, and these new additions will be a valuable part of the region's succession planning exercise.

Further discussions were conducted during the year on the proposed transfer of seven Winnipeg-based Environmental Health Officers to the Winnipeg Regional Health Authority. As part of the rollout of the provincial Drinking Water Program three full-time Drinking Water Officers were assigned to the Red River Region.

District Activities

Approximately 1500 Occurrence Reports were received, of which 600 involved problem wildlife and 400 required enforcement action. The remaining issues were related to fire suppression and other non-enforcement resource management issues.

The region was extensively involved with the sewage spill clean up and infrastructure repair at the City of Winnipeg's North End Pollution Control Centre. Information related to the investigation of the spill with recommendations was submitted to the Clean Environment Commission prior to the public hearings that were held.

Participated in the mediation process related to odour emission from the Rothsay Rendering Plant in St. Boniface. Mediation process was successfully completed and odour problems have been addressed to the satisfaction of the residents.

Developed guidelines for the use of Auto Shredder Residue (ASR) as a daily cover at Class I landfills. Issued approvals to one ASR generator in the Winnipeg area to transport ASR to landfill, and for two Class I landfills in the Winnipeg region to accept ASR.

The region reviewed and issued 66 new permits for the construction of manure storage facilities, inspected 282 operations during the annual inspection, reviewed and commented on 54 technical reviews.

Monitoring was conducted on commercial fishing activity, primarily along the south end of Lake Manitoba.

The use of decoys as part of the enforcement program during the fall deer-hunting season was particularly successful.

Parks

Trappist Monastery Provincial Park in St. Norbert was officially opened. The ruins at the site provide a good example of a small Canadian monastic complex and exemplify a distinctly French form of architecture imported to the Canadian Prairies.

Development of trails, signage and other infrastructure was carried out in Pembina Valley Provincial Park.

St. Ambroise Provincial Park suffered significant damage in yet another violent windstorm, which resulted in closure of the campground for two weeks. Clean up continued throughout the summer.

Development of the group use area at St. Malo Provincial Park was completed.

Further work was carried out on the tall grass prairie restoration program at Beaudry Provincial Park. At 125 hectares, this program is one of the largest of its kind in Canada.

Waterway Management

Regional staff were heavily involved in addressing the flooding resulting from heavy rains in the Southeast sector of the region in June 2002. Activities included upgrading work on the Gardenton Floodway, monitoring water levels and flow rates on the Roseau and Red Rivers, operating pumping stations in ring dykes and providing technical advice and assistance to municipal authorities and landowners.

The 2002 phase of reconstruction of the South Buffalo Drain was completed at a cost of $360,000.

310 drainage licence applications were processed.

Table RO.26

12.3(g) Red River Region

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	4,453.9	86.53	4,821.1	(367.2)	
Other Expenditures	1,278.4		1,300.0	(21.6)	

Fire Program

754 fires burned 81,186 hectares, well above the long-term average of 544 fires but well below the long-term average of 432,028 hectares burned. The spring began with earlier than normal fire activity due to low snowfall conditions and lack of spring rains. The most serious fires occurred from April to mid May.

2002 Fire Season

Light snowfall in most areas coupled with below normal spring precipitation gave rise to significant fire activity. 308 wildfires had occurred by May 30. Most of this activity occurred in the Interlake Region as a result of a rising trend of human caused spring fires. 307 of the fires were human caused. 9,241 hectares were burned by May 30th. This compares to the long-term average of 52,488 hectares. This reduction appears to be attributable to the implementation and refinement of the province's initial attack preparedness and response system.

June's total increased by 106 fires. 60 of these were human caused and 46 were lightning caused. 58,990 hectares were burned. Moist cool weather reduced fire activity to 38 fires in August and September. Total fires for the year were 753. In the 2002 fire season 81,169 hectares burned. The 20-year average is 544 fires with average losses of 432,028 hectares.

Fire program used 7 CL-215 waterbombers, 3 Cessna 310 Bird Dog aircraft and 3 single engine Otter aircraft, operated by Manitoba Government Air Division. In addition, the province seasonally contracts 1 - Bell 206 Long Ranger, 1 - Bell 204 and 3 - Bell 205 helicopters from private operators. Through Standing Offers, the Program casually contracts additional helicopters and fixed-wing aircraft as required.

Air operations staff continued to work closely with Manitoba Aerial Applicator Operators to enhance their capability to deliver long-term fire retardant. There is a need, during spring ice breakup, to have an air tanker resource when the ice prevents refilling waterbombers from lakes, employing 14 aircraft and 3 forward attack bases.

Use of chemical fire retardant and suppressant continued. The contract-supplied material is bulk and is stored at Gimli airport and trucked to forward attack bases. 52.5 kgs of retardant and 90,000 litres of foam were purchased for CL-215 operations.

Nomex 2-piece protective clothing is now standard issue for Initial Attack (IA) crews and other fireline staff. The department will be implementing a Provincial Fire Pump Parts program that will result in parts standardization and cost savings. The Swan River mobile command trailer was retrofitted and deployed on fires. New portable fuel forwarding systems were acquired to facilitate high volume refueling for fixed and rotary wing aircraft.

Fire training concentrated on IA crews. A crew-boss session was held in the spring. Most crewmembers have now received first-aid training required by Workplace Health and Safety regulations, and most IA staff have been certified to CIFFC national standards. Intermediate and advanced Wildland Fire Behaviour courses were conducted, 30 fire staff graduated. Twenty staff members were trained to the Incident Command System Levels 2 and 3 and12 of them will become instructors for the departmental training initiative in 2003.

Fire prevention radio commercials and newspaper ads were aimed at spring burning and at being careful in wooded areas. These ran in the spring, the first part of June and during the fire period at the end of July.

Equipment and personnel are shared with other jurisdictions in Canada under the Mutual Aid Resources Sharing Agreement (MARS). Manitoba fire suppression staff and IA crews were deployed to Alberta, Saskatchewan and Oregon. Waterbomber assistance was provided to Alberta, Saskatchewan and Quebec. Manitoba received $1.3 million in revenue through these deployments.

Table RO.27
12.3(h) Fire Program

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	4,760.8	58.69	4,617.5	143.3	
Other Expenditures	7,582.1		7,814.9	(232.8)	

Table RO.28
Number of Fires and Area Burned by Region and Cause

	Northeast		Northwest		Western		Central		Eastern		Province	
CAUSE	# fires	area burned hectares	# fires	area burned hectares	# fires	area burned hectares	# fires	area burned hectares	# fires	area burned hectares	# fires	area burned hectares
Recreation	17	134.1	11	613.9	6	785.4	3	57.7	13	7.1	**50**	**1,598.2**
Settlement	9	26.4	1	0.2	7	202.1	51	1,760.1	8	7.4	**76**	**1,996.2**
Woods operations					1	0.1					**1**	**0.1**
Other industry	1	0.5	1	0.4	3	633.7			3	22.5	**8**	**657.1**
Railroads	2	0.2	7	20.0	1	177.7			4	174.7	**14**	**372.6**
Public projects	1	0.1	1	39.9							**2**	**40.0**
Incendiary	38	42.6	5	3.1	3	18.7	7	92.3	9	21.3	**62**	**178.0**
Miscellaneous	2	4.0	3	7.6					10	3.8	**15**	**15.4**
Agricultural					3	91.1			3	23.0	**6**	**114.1**
Lightning	219	73,658.2	57	161.9	14	13.2	1	1.0	13	107.4	**304**	**73,941.7**
all causes	**289**	**73,866.1**	**86**	**847.0**	**38**	**1,922.0**	**62**	**1,911.1**	**63**	**367.2**	**538**	**78,913.4**

Table RO.29
Number of Fires and Area Burned by Priority Zone and Action Status

	Actioned Fires				No Action Fires				Limited Action Fires				All Fires			
ZONE	# fires	% fires	Area burned (hectares)	% of area burned	# fires	% fires	area burned (hectares)	% of area burned	# fires	% fires	area burned (hectares)	% of area burned	# fires	% fires	area burned (hectares)	% of area
Red	271	59.4	4,374.4	13.0	2	2.7	1.2	0.0	1	14.3	0.1	0.0	274	50.9	4,375.7	
Yellow	2	0.4	779.8	2.3									2	0.4	779.8	
Green	166	36.4	27,023.0	80.1	22	29.3	15,704.0	35.6	2	28.6	711.9	64.3	190	35.3	43,438.9	
White	17	3.7	1,569.1	4.6	51	68.0	28,354.3	64.4	4	57.1	395.6	35.7	72	13.4	30,319.0	
All Zones	456	100	33,746.3	100	75	100	44,059.5	100	7	100	1,107.6	100	538	100	78,913.4	

Figure 3. Number of Fires

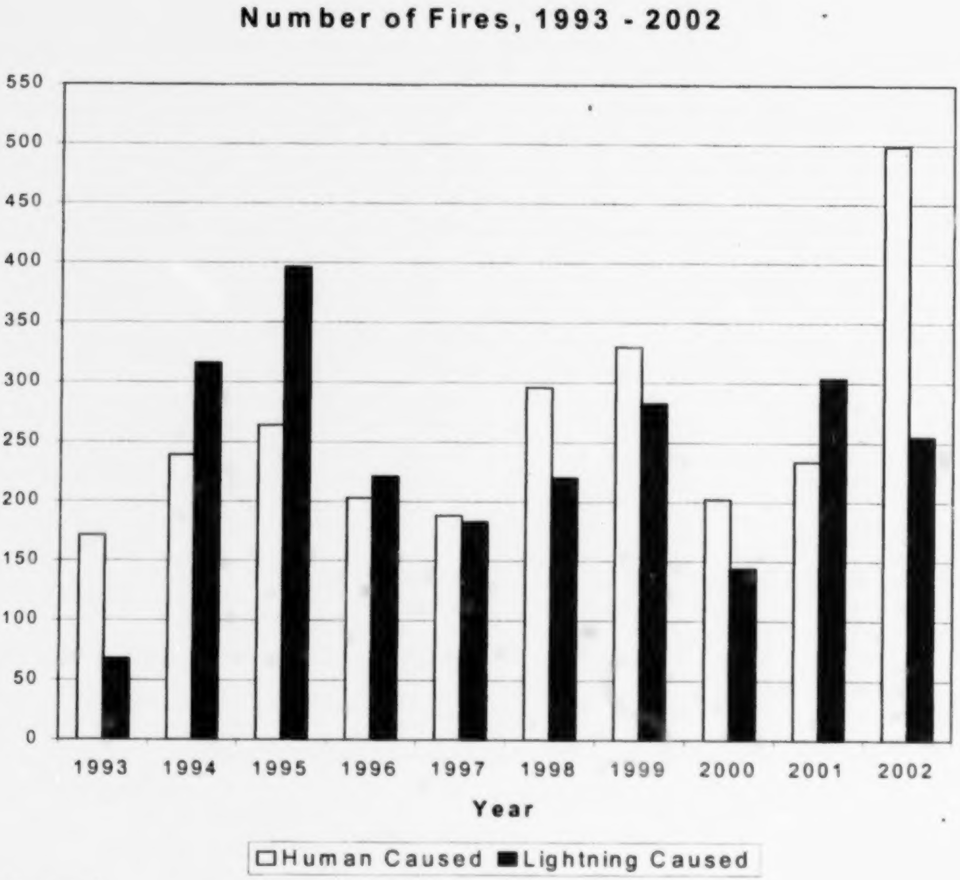
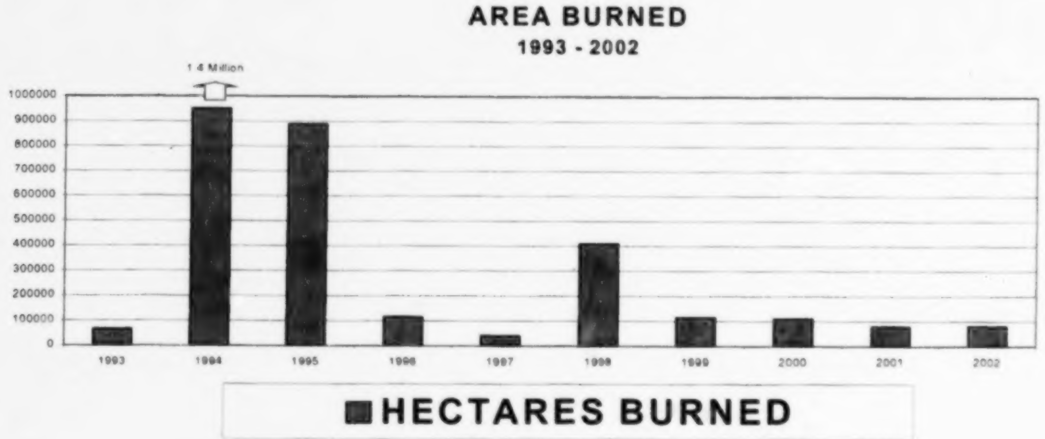


Figure 4. Area Burned



Office of Drinking Water

Work is proceeding on the staffing of the new Office of Drinking Water unit. Further to the five staff that formed the initial core of the Office of Drinking Water, 12 new staff positions were bulletined in September of 2002. The 12 Drinking Water Officer positions have now been filled with ten being assigned to Conservation's six regions and two in the central office. One vacant Engineering position for the central office has also been filled.

Training of the Drinking Water Officers is proceeding concurrent with the transfer of monitoring responsibilities from the Public Health Inspectors to the Drinking Water Officers. Initial inspection activities are related to bacterial safety of drinking water supplies.

Activities during 2002-2003:

- 40 proposals for water treatment and distribution works were submitted for approval under the ***Public Health Act***.
- 21 proposals were processed for Certificates of Approval under the ***Public Health Act***.
- 15 proposals were reviewed with no Certificate being required under the Act.
- 2250 phone calls were received from owners, operators of utilities, municipal authorities, consultants and the general public.
- 75 Inspections of waterworks systems were carried out in 2002/03.

The ***Drinking Water Safety Act*** received Royal Assent in August of 2002. Work is now proceeding on the development of regulations under this new Act. The Act will focus on monitoring of water quality, preventing contamination, and identifying potential risks and appropriate water-quality improvements. The Act, when proclaimed will provide the Office of Drinking Water and provincial health officers with a new mandate and responsibility for drinking water quality.

Table RO.30

12.3(j) Office of Drinking Water

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	364.3	18.00	812.7	(448.4)	
Other Expenditures	812.0		1,009.4	(197.4)	

Conservation Programs

Divisional Administration

Divisional administration provides strategic management of Manitoba's natural resources and environment (water, air, parks, lands, forests, fish, and wildlife) in keeping with the principles of sustainable development. This includes promotion of activities promoting pollution prevention.

Conservation Programs Division comprises:

- Water Branch
- Parks and Natural Areas Branch
- Forestry Branch
- Fisheries Branch
- Wildlife and Ecosystem Protection Branch
- Pollution Prevention Branch
- Lands Branch
- Air Quality Section

Climate Change Branch has been transferred to the new Energy, Science and Technology Department. Information on their activities can be found in that department's annual report.

Table CP.1

12.4(a) Divisional Administration

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	145.4	2.00	134.4	11.0	
Other Expenditures	151.9		90.5	61.4	

Water Management

Water resources continue to be managed to provide present and future generations with a healthy environment and an abundance of diverse natural resources. This is achieved though ensuring the sustainability of water resources, protecting the integrity of the environment and conserving bio-diversity, minimising the effects of natural disasters; while optimising opportunities for sustainable economic benefits and recreation.

Administration

Staff ensure sustainable development, allocation, and conservation of water resources by adhering to policy and procedures; controlling funding; negotiating and administering contracts; and monitoring efficiency and effectiveness of expenditures.

Table WM.1

12.4(b)1 Administration

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	335.2	7.00	310.5	24.7	
Other Expenditures	1,934.7		1,929.8	4.9	
Grant Assistance	16.0		25.0	(9.0)	
Total Other Expenditures	1,950.7		1,954.8	(4.1)	

Water Licensing

The Section contributed to sustainable development of water resources by licensing and enforcement of water use projects and waterpower projects.

Water Use Regulation

Implementation of water allocation plans continued for Winkler, Assiniboine Delta, and Oak Lake Aquifers, and the Whitemud River and tributaries, and south central Manitoba. Development of water allocation plans for the Assiniboine River and Boyne River continued. Implementation of a "use it or lose it" policy, as provided by ***The Water Rights Act***, continued as part of the strategy to address the licensing backlog. Administrative policies and procedures concerning licensing under the Act were developed and/or clarified. The Act and policy provide for amendment or cancellation of licences if works are not constructed, or if water is not used in amounts or for purposes specified, in the licence. Applicants for licences were contacted to determine status of their projects. This initiative resulted in closure of 115 files.

The Section participated in water management planning for Assiniboine Delta Aquifer. Computerised water balance models were developed for use in allocation planning for the Whitemud River and tributaries and the models for surface water sources in south central Manitoba were expanded. Fees were assessed and collected for water used for industrial purposes.

Table WM.2

Water Use Regulation

Applications received for licenses	Surface Water	Groundwater
Applications for renewal of licence	10	187
Applications for new licence	42	91
Total number of applications received	52	109

Licenses issued by type	Surface Water	Groundwater
Domestic	0	0
Municipal	1	3
Agricultural	6	19
Industrial (including mining)	1	2
Irrigation	30	20
Other purposes	0	3
Total number of licenses issued	38	47

Other licensing activities completed	Surface Water	Groundwater
Application (project) assessment completed	37	51
Development/exploration Permit issued	9	24
Authorization for Temporary Water Use issued	10	0
Licenses/applications reviewed and file closed	72	43
Total number of other licensing activities completed	128	118

Telephone inquires concerning program activities	Surface Water	Groundwater
Telephone inquiries concerning program activities	1800	1400

Water Use Revenue	
Licence (application) fees	$8,050.00
Industrial water use charges	$176,327.20
Total	$184,377.20

Water Power Regulation and Crown Land Development Review

Recommendations were made on 110 proposals for use and development of 275 parcels of Crown land in Water Power Licence Areas and Water Power Reserve Areas.

Table WM.3
Water Power Revenue

Utility	Land Rentals	Water Power Rentals	Kilowatt-Hours Production
Manitoba Hydro	$703,712.64	$95,103,660.08	28,128,282
Winnipeg Hydro*	$23,985.98	$715,333.42	439,394
TOTAL	$727,698.62	$95,818,993.50	28,567,676

*Manitoba Hydro purchased Winnipeg Hydro effective September 4, 2002

Table WM.4
12.4(b)2 Water Licensing

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	910.8	16.00	719.8	191.0	
Other Expenditures	36.6		37.1	(.5)	

Water Planning and Development

The Section conducts stakeholder-based basin, watershed and aquifer management planning; reviews legislation, policies, programs, strategies, and directives, and carries out water impact reviews.

Water Planning and Communication

Planning and communication services ensured that developments were sustainable, resource and stakeholder interests were protected, and impacts minimised. The general public and clients were informed about issues, programs, activities, developments, and proposals. The Branch's Website was used extensively to provide information to clients.

Investigations were undertaken, reports prepared and presentations made to enhance awareness and to respond to concerns. Stakeholder-based basin, watershed, and aquifer management planning continued.

Upper Assiniboine River Basin Study

Manitoba, based on input received from various departments has formulated a response to the study recommendations. Once reviewed and approved it will be forwarded on.

Pembina River Basin Management Plan

A framework plan was completed. A three-year, water-quality monitoring project was initiated in four sub-watersheds: Headwaters/Pelican Lake, Badger Creek/Rock Lake, Cypress Creek, and Lower Pembina. This project is scheduled for completion by December 2004. It will establish baseline data to prioritize water quality projects and spending.

Little Saskatchewan River Watershed

Discussion with municipalities continued towards initiating a stakeholder-based water management plan for the Little Saskatchewan River Watershed.

Winkler Aquifer Management Plan

Planning and administrative assistance was provided to Winkler Aquifer Management Advisory Board to facilitate implementation by its five action groups.

Oak Lake Aquifer Management Plan

Planning and administrative assistance was provided to the Oak Lake Aquifer Management Advisory Board to facilitate implementation by its four action groups.

Swan Lake Basin Management Plan

A stakeholder-based planning process completed a draft water management plan for Manitoba and Saskatchewan portions of this basin. An agreement was reached to hold open houses and public meetings in the fall of 2003 to obtain additional input and to finalise the plan.

Assiniboine Delta Aquifer – Management Plan

Work continued toward a stakeholder-based plan to guide development and ensure aquifer protection and sustainability. Technical Advisory Group members presented their background reports to the stakeholder Round Table of 46 local agencies in preparation for beginning work on a draft management plan for the aquifer.

Tri-Lakes

The Branch is providing technical support to the Tri-Lakes (Pelican, Rock and Swan Lake) Development Corporation for water projects to enhance recreational opportunities on Rock Lake and Swan Lake.

Legislation and Policy

To ensure sustainable development of water resources, legislation, policies, programs, strategies and directives were reviewed. Revisions were prepared to *The Water Rights Act Regulation* to allow for Ministerial approval of application forms and licences. *The Designated Flood Area Regulation*, under ***The Water Resources Administration Act*** was redrafted to provide increased flood protection. The Branch also participated in the development of legislation related to compensation for artificial flooding in the Red River Valley.

The Manitoba Water Strategy

Task teams were struck and work began on the four components of *Water: A Proposed Strategic Plan for Manitoba*, including issue-specific provincial strategies, watershed management planning, legislative framework and financial underpinnings. The strategy will lead to comprehensive water legislation and locally driven water management and planning, based on watershed boundaries.

Water Control Infrastructure

Waterways, crossings, water control structures, dams, dykes, drainage channels and major flood control works are managed and monitored. Inspection and assessment services are provided to maintain safety and function and to identify refurbishment and upgrading requirements. Proposals that could affect this infrastructure's integrity are investigated and authorisation permits outlining terms for continued safe and effective control are issued.

Drainage and Litigation

Land drainage licensing includes investigation, compliance, enforcement and resolution of complaints. Contracts for upgrading and rehabilitating agricultural drainage systems were co-ordinated and supervised.

Water Diversion Works Regulation

Technical advice was provided to license applicants to protect the public interest and affected people or resources, particularly in respect of works that crossed or affected adjacent properties where capacity of the owner, usually the municipality, was required.

In evaluating drainage project applications, consideration was given to impacts on water resources, wildlife, fisheries, agricultural land base, public and private property, receiving drainage works, and natural waterways and waterbodies. 535 applications for drainage licences were received, 14 Ministerial Orders were prepared and 302 drainage licences issued.

The *Annual Report of the Dyking Commissioner* was prepared.

Data Management

A database of provincially owned infrastructure detail including maps, plans, field/survey information, and microfiches is maintained. Requests for loans or reproduction were filled and specialised equipment and supplies maintained.

Water Projects

Assiniboine River Dykes Rehabilitation

Refurbishment was completed at sites during fall and winter.

Red River Floodway Rehabilitation

Refurbishment of the inlet control structure's west gate, below the waterline, was completed.

Table WM.5

Development Review of Water Impacts

Water Impact Reviews	1998-99	1999-00	2000-01	2001-02	2002-03
Proposals for subdivisions, municipal development plans and zoning by-laws	157	515	560	542	540
Designated Flood Area Permits	400	239	180	150	116
IDG circulars, including ***Environment Act*** proposals and Sustainable Development Innovation Fund applications	72	52	120	125	120
Crown land sales, and Lease and Permit applications	197	268	240	175	170

Table WM.6

12.4(b)3 Water Planning and Development

Expenditures by Sub-appropriation	Actual 2002/03 $	FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	1,004.2	17.00	1,102.5	(98.3)	
Total Other Expenditures	71.1		71.1	0.0	

Surface Water Management

Level and streamflow forecasts, and status reports on hydrologic conditions of rivers, lakes and reservoirs, were provided, with emphasis on operation of control works and flood protection. Planning and engineering studies were undertaken for water use, allocation and licensing, public information, and multi-disciplinary resource management. Operation of dams was co-ordinated for water supply, conservation, flood control, fish and wildlife habitat, and recreation. Specialized hydrologic analysis, advice and information were provided.

Hydrologic Forecasting and Reporting

Watersheds were generally dry and river levels low during April and May 2002. There was no flooding from snowmelt runoff during the spring of 2002.

A record rainstorm June 10-11, 2002 in south-eastern Manitoba resulted in severe flooding on the Roseau River, Rat River, Whitemouth River, Joubert Creek, Sprague Creek, Pine Creek, and many smaller streams in south-eastern Manitoba. Up to 300mm of rain fell in the Vita area during this storm. The Village of Sprague was completely flooded and many other villages in Southeast Manitoba sustained significant flood damages. Flooding of agricultural lands was severe, resulting in crop losses and reduced yields. Flooding along the Roseau River was greatly reduced by the Gardenton Floodway, which was quickly upgraded with earth and sandbags at low spots. The storm in south-eastern Manitoba is believed to have a return period of more than 100mm in the Miami-Deerwood areas, the Altona area and portions of the Pembina River watershed. Torrential downpours in the Steinbach area July 2 created local flooding problems and raised the Seine River above flood stage for a few days. Heavy rain during June and July in the United States portion of the Red River watershed raised the Red River to record high summer levels, and resulted in the first summer operation of the Red River Floodway to reduce river levels and the risk of basement flooding in the City of Winnipeg. At the same time generally dry conditions prevailed in western Manitoba although heavy August rains provided some relief.

Spring flood and water supply outlooks were issued during February and March 2003 as usual. This included conditions and forecasts for rivers, lakes, reservoirs, and aquifers.

Daily reports and forecasts were issued for the Red River and the Roseau River from June 13 to July 26, 2002 due to record high summer flows and serious flooding problems in the region.

Weekly River reports were prepared and distributed via e-mail and web site throughout the year, describing river conditions together with charts and river statistics.

Monthly lake reports were issued from May to November providing lake levels, inflows and lake level forecasts.

Hydrologic condition and outlook reports were issued in May and November describing conditions and outlooks for watersheds, reservoirs, aquifers, lakes, rivers, and indicating the state of on-farm water supplies.

Volume inflow forecasts were prepared for Shellmouth Reservoir on a monthly basis during the early winter and on a weekly basis during March and April to facilitate operation of Shellmouth Dam. Forecasts of net inflow were also prepared every two months for Lake Manitoba regulation using Fairford Dam. Inflow forecasts were also prepared for Dauphin Lake and Pelican Lake to facilitate operation of control works on these lakes. Volume inflow forecasts for the Red River at Selkirk were also prepared periodically for use by Manitoba Hydro in Lake Winnipeg regulation.

Staff responded to hundreds of requests for information on hydrologic conditions and forecasts, received via telephone, e-mail and web site. Requests came from consultants, construction firms, cities, municipalities, emergency managers, canoeists, and others. Many more requests for information and advice on studies were from universities, schools, consultants and the general public.

The Hydrologic Forecast Centre also liased with other forecast agencies in Saskatchewan and the United States through phone, e-mail, workshops and conferences.

Hydrologic and Hydrometeorological Analysis

Charts showing storm precipitation and monthly precipitation were prepared throughout the year and distributed to major users such as Manitoba Hydro.

Updating of runoff and river forecasting procedures continued with a further 20 basins updated together with unit hydrographs.

A study to determine the effect of climate change on Red River flood magnitudes and frequencies was completed and presented at a National Symposium on hydrology.

Hydrologic services included providing: design flows for highway crossings and waterways for Conservation Regional Offices, Transportation and Government Services, consultants, and municipalities; performing water availability analyses and determining instream flow requirements for several small site-specific locations for Water Rights Licenses; providing historic water level and streamflow information; undertaking hydrologic impact assessment studies; developing methodology for determining fish passage flows (3-day flows) for waterway openings, which is currently being utilized; and, participating in Value Engineering workshop for Floodway expansion.

Technical support was provided to KGS Group hired to evaluate the Water Branch's computer model developed for the Big Grass Marsh and to find the benefits and the costs related to constructing a channel from the south end of the Big Grass Marsh to Lake Manitoba. KGS agreed that the model was a good representation of the marsh and likely slightly overstates the benefits of a channel.

Continued hydrologic support was provided to Assiniboine River Instream Flow Working Group. Historic flows for 1969-2000 were adjusted to unregulated conditions by removing effects of Shellmouth Dam, La Salle River Diversion, and Portage Diversion. Present regulation and full-allocation flows were simulated for 1913-2000 to assess impacts of fish habitat change under regulation, This information was used in Golder Associates "Report on Instream Flow Needs Modelling For Four Reaches of the Assiniboine River", dated December 2002.

Water Quality Design flows were computed for the Red River near Lockport and Ste. Agathe and the Assiniboine River at Headingley for the Water Quality Section as part of Clean Environment Commission's Public Hearing on the review of the City of Winnipeg's Wastewater Collection and Treatment Systems. Water Quality Design flows were also computed for the Souris River at Wawanesa and the Assiniboine River at Brandon, Portage la Prairie and Miniota.

The 1991 reservoir analysis of Jackson Lake was updated in light of an additional 10 years of hydrologic records. The review is a result of Water Licensing receiving inquires concerning the possibility of using water from Jackson Lake for irrigation purposes. The analysis found the Lake's 1991 rule curve was still applicable.

The impact that water allocation on the Assiniboine Delta Aquifer (ADFA) will have on the Assiniboine River System's water allocation limits was assessed.

Procedures were completed to assess, on small perennial streams, water availability after accounting for fish requirements. These procedures were applied to Water Balance Allocation Model developed for the Whitemud River Watershed.

Water Planning and Communication Section was assisted with the Technical Advisory Groups, which support Sustainable Development Round Tables. Reports were prepared and presentations made on baseline hydrology information to Swan Lake Water, Stephenfield Lake and Assiniboine Delta Aquifer Management Groups.

Surface Water Data Collection

The Branch relies on water level and streamflow data collected under the *Canada-Manitoba Hydrometric Agreement* for operating water control works, flood forecasting, water management investigations, and hydrologic studies. Environment Canada operated 134 discharge and 62 water-level gauging stations under the Agreement. Real-time hourly data was retrieved at 173 sites in Manitoba and adjacent provinces and states.

To supplement the federal-provincial network, levels were monitored at 135 gauging sites. At two sites, daily streamflow data was obtained. At nine sites digital water level recorders were installed. The number of federally and provincially operated hydrometric stations since 1995-96 is shown below.

Table WM.7

Hydrometric Station Operation

	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
Federal-Provincial stations	227	227	174	179	179	188	196	206
Provincial Stations	123	123	135	129	126	117	110	110

Data for 72 provincial stations was forwarded to Environment Canada's database. Provincial and federal data were added to the provincial database.

Water Supply Management, Structure Operation and Allocation Planning

Reservoir levels and spring inflows were monitored to assess flooding and potential supply problems. Inspections were conducted at dams and reservoirs to evaluate performance and concerns were investigated. Stakeholder-supported operating plans, and plans for supply for municipal and industrial uses were carried out. Surface water supplies were sustainably managed through regional or provincial plans, strategies, and policies. Municipal use data was obtained and usage at about 100 communities was updated.

A Lake Manitoba Regulation Review Committee was established to determine the most acceptable range of regulation for Lake Manitoba and also to consider the best course of action for the water regime along the Fairford River, Lake Pineimuta, Lake St. Martin and the Dauphin River. The Committee met several times, heard presentations from various technical experts on topics related to the terms of reference and in April 2002 held five public meeting at various locations around Lake Manitoba. The Committee is expected to publish its report in May 2003.

A cost sharing agreement was negotiated with Canada that will see spillway gates added to the Shellmouth Dam on the Assiniboine River near Russell, Manitoba. The spillway gates will provide enhanced water management capabilities and will ensure additional water supply for irrigation expansion and other development opportunities downstream along the Assiniboine River.

Reservoir Regulation

Reservoir operation scenarios were prepared for Shellmouth Dam to regulate levels on Lake of The Prairies for flood control and water supply purposes. These were based on predicted inflows and on various outflow scenarios, which appeared to best meet the target reservoir levels and desired downstream conditions from the forecast date until early June. Operation scenarios were prepared for lower decile, median and upper decile weather conditions. The scenarios were presented to the Shellmouth Reservoir Operation Liaison Committee for discussion before operation decisions were made. This process was repeated 12 times during the year.

Operation scenarios were prepared to facilitate operation of Fairford Dam for Lake Manitoba regulation, for Mossy Dam for Dauphin Lake regulation and for the operation of Pelican Lake control works. Advice was provided to Operations Branch regarding operation of Stephenfield Reservoir and Rivers Reservoir.

Information on operation of dams in Saskatchewan, such as those on Tobin Lake, Round Lake, and Moosomin Reservoir and their effects on river flows and levels in Manitoba was obtained and provided to Regional Operations Staff, and to a local committee on Pipestone Creek.

All major reservoirs filled to target levels by late May. Shellmouth Reservoir peaked at 427.90m about mid-September and receded to summer target by mid-December. Stephenfield Reservoir and Rivers Reservoir filled as usual. Lake Manitoba peaked at 247.49m at the beginning of July, slightly below target level, and remained near the lower limit of the range of regulation for the rest of the year. Dauphin Lake peaked in early May at 260.48m, 0.06m below summer target level. Brereton Lake peaked at 316.28m in mid-June, 0.26m above target. Falcon Lake peaked at 325.22m in mid-June, 0.55m above summer target level. West Hawk Lake peaked at 332.98m in mid-June, 0.44m above summer target level.

Flood Damage Reduction

The Red River Floodway and Portage Diversion were not operated in the spring of 2002 because of low spring river flows. However, the Floodway was operated from June 18 to 25, then again from July 2 to August 4, with a peak discharge of 8,000 cfs. The first-ever operation during the summer time was undertaken to reduce the potential of basement flooding within Winnipeg, due to heavy rainstorms and high river levels. In the past, such damages have exceeded $100 million in value. The Red River Floodway Operation Advisory Board held two meetings in June to discuss the possibility of operating the Floodway during the summer. The Board concluded that such operation was justified given the potential damages within Winnipeg. The July 4 to August 4 operation resulted in water levels being higher than natural south of the Floodway gates. A total of $303,000 was provided in compensation to landowners that experienced material damages because of these higher water levels. KGS Group was hired to undertake a comprehensive examination of the benefits and costs of operating the Floodway in future summers. The study is being overseen by a Steering Committee comprised of representatives of the Federal and Provincial Governments, the cities of Winnipeg and Selkirk, and the rural municipalities of Ritchot, MacDonald, and Morris. As well, Acres Consulting Ltd. has been hired to update the relationships used to calculate the natural water levels immediately south of the Floodway gates. The Floodway is normally operated so that the water level at the location is the natural water level. This study is being overseen by the same Steering Committee.

The MIKE-11 hydrodynamic model of Red River valley was used to estimate flows and water levels for a number of large floods. The water level information for these large floods was placed on a website that provides information on a variety of aspects of flooding in the Red River Valley.

Table WM.8
12.4(b)4 Surface Water Management

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	783.3	14.00	840.4	(57.1)	
Other Expenditures	229.8		244.7	(14.9)	
Canada-Manitoba Agreement for Water Quantity Surveys	587.0		587.0	0.0	
Total Other Expenditures	816.8		831.7	(14.9)	

Groundwater Management

The Section's activities enhance our ability to monitor and manage provincial groundwater resources in a sustainable manner. Major activities include administration of ***The Ground Water and Water Well Act***; collection and storage of information on occurrence of aquifers, quality of groundwater in them, and their sustainable yields; and compilation of this information in the form of maps, reports and raw data. Concurrently, the Section has become focussed on extensive studies of rural groundwater quality and investigating potential impacts of agricultural activities on groundwater quality.

Aquifer Administration

One major activity was planning and evaluation of operational and potential programs to improve aquifer management. Liaison with licensed water well contractors, an essential activity, was maintained as required and at bi-annual meetings of the Manitoba Water Well Association.

Issues of groundwater management at inter-provincial boundaries were addressed in participation on Prairie Provinces Water Board Committee on Groundwater. The Section also worked with the Geological Survey of Canada and Prairie Farm Rehabilitation Administration regarding prairie-wide water well database development, potential climate change impacts on groundwater, and development of risk mapping under the federal *Hog Environmental Management Strategy*.

Consultation on groundwater quantity and quality issues was provided to other Branches and to Manitoba Transportation and Government Services, and Intergovernmental Affairs. Assistance was also provided to Winnipeg, Winkler, McCreary, Neepawa, Selkirk, Brandon, Rural Municipalities, and Conservation Districts. Technical advice was provided to groups working on aquifer management plans.

Aquifer Data

Groundwater levels were monitored in a network of 660 observation wells in major aquifers. Levels were monitored continuously in 490 wells with automatic recorders, while manual readings were collected from the remainder. Quality was determined by analysing about 500 samples. Temperature was monitored in 25 recording and 100 manual observation wells to determine change in background quality or consequences of geothermal energy activities.

The Section maintained a network of 35 rain gauges and 38 soil-moisture monitoring stations to provide additional information for development of water budgets for several aquifers. Groundwater monitoring data was stored in a computerised database and provided on request to internal and external users. Based on water levels recorded in observation wells, a summary of water levels in major aquifers was prepared quarterly for the *Water Supply Conditions and Outlook* report.

About 1,600 drilling reports were received from licensed water well contractors. Well reports were entered into GWDrill, a digital database containing records for about 95,000 drill logs. A recent output from this database was supplied to drilling contractors, government agencies and consulting engineers on compact disk.

Responses were given for about 1,000 telephone and/or written enquires, including information on specific wells, general groundwater conditions, groundwater levels or chemistry. Groundwater availability appraisals for specific locations were also prepared in response to about three dozen requests.

Aquifer Definition

Cooperative studies continued with the University of Manitoba to investigate seepage from earthen hog manure storage facilities. Cores were collected at one additional storage constructed into lacustrine clay. The M.Sc. student carrying out this project will complete her thesis in 2003/04. A second cooperative study with the University of Manitoba was also continued, to examine microbial impacts on shallow groundwater resulting from the application of liquid hog manure as a crop fertilizer over a shallow sand aquifer. Populations of indicator microbial species continue to be undetected in most monitoring wells when sampling has been undertaken. This project will be completed with the publication of a M.Sc. thesis in 2003/04.

Input was provided to a number of projects being undertaken by other agencies, including development of an agricultural risk-based mapping methodology by Agriculture and Agri-food Canada, an evaluation of soil and groundwater contamination that may be associated with cattle wintering areas, seepage beneath "hoop" structures used to house feeder hogs, and the development of the Living With Livestock Production series of fact sheets.

Studies continued at three sites to examine the potential for groundwater quality impacts from land application of liquid hog manure as a crop fertiliser. Long term monitoring is planned at all three sites.

A number of presentations were given to provincial staff and the public outlining the results of studies which have been carried out over the past few years on agricultural impacts on groundwater.

Assistance was provided to the public, municipal and provincial government staff in response to requests for information or review of reports

Other Activities

Cooperation continued with Manitoba Industry, Trade and Mines, Geological Survey of Canada and University of Manitoba on studies of Paleozoic bedrock aquifers in south and central Manitoba. Assistance was provided to the public and other government departments on a daily basis, most frequently with evaluations of potential for groundwater quality impacts from proposed landfill sites, earthen manure storages, and municipal lagoons. Assistance with well or water quality problems was also provided. Assistance was provided to other Branches with instances of groundwater or soils contamination. Cooperation continued with Manitoba Agriculture and Food, and Agri-Food Canada on the federal *Hog Environmental Management Strategy* and methods for aquifer sensitivity mapping being considered under this program. Talks and presentations were given to staff and the public on potential groundwater impacts from hog and cattle operations and results of studies.

Saline Water Wells

Monitoring continued in the vicinity of saline wells in the Ile des Chênes area, which the Branch had previously sealed off the lower portions. Quality in nearby wells continued very slow improvement.

Aquifer Capacity

Groundwater studies were continued in southwestern Manitoba. The objective of this work was to determine aquifer capacity and quality for farm and commercial development. Thirty stratigraphic testholes and six observation wells were installed.

Test work was also done in the Interlake and southeastern Manitoba. This work was to enhance the understanding of groundwater in the Interlake area. Fifteen observation wells and boreholes were established.

A major aspect of this program is management of the limestone aquifer underneath Winnipeg, eastern Red River Basin and Interlake areas. This aquifer provides about 20 percent of the water used in Winnipeg. It also provides all water for Selkirk, Steinbach and numerous other urban and rural areas. Hydrogeological evaluation of irrigation water supply and groundwater impacts continued for Assiniboine Delta Aquifer. Adequacy of water supply from Brandon aquifer for Simplot was monitored. Water supply aspects of Winkler and Oak Lake aquifers were reviewed. Over 200 requests for advice or information were responded to. Four presentations were made on aquifer capacity. In the Niverville area three observation wells were completed, two with regard to recharging fresh water overflow from the Ste. Agathe waterline and one to monitor the impact of continued rural development in this area.

Eight diamond-drilling applications were reviewed for Manitoba Industry, Trade and Mines. Manitoba Transportation and Transportation Services was assisted to solve major groundwater-related roadbed problems at three sites.

Value Added Livestock Initiative

Livestock Technical Reviews

The livestock initiative personnel continue to serve on three Technical Review Committees. Hydrogeological aspects of proposals for new or expanding livestock operations were reviewed and technical expertise was provided. More than 80 reviews were completed.

Agricultural Effects on Groundwater

Soil and groundwater investigations and monitoring are continuing at four study sites to evaluate potential impacts from long-term application of animal manure as a fertiliser. In addition to site characterisation and on-going monitoring a rigorous program of sampling for environmental isotopes was continued to determine sources and fate of nitrate. Long-term studies are necessary to evaluate the systems with respect to changes in farming practices.

Monitoring was initiated during the fall on groundwater contaminated within a shallow sand aquifer from the rupture of a manure storage tank near MacGregor. Results of field monitoring of manure applied as a fertiliser on a field were presented to cooperators, industry personnel, and also to technical audiences at the 47th Annual Midwest Ground Water Conference, North Dakota (October 2002) and to the Manitoba Soil Science Society Conference (January 2003). Information was presented regarding groundwater and groundwater quality issues to the general public, rural administrators, industry, and various government departments.

Cooperation with Other Government Departments and the Public

Technical advice was continued to the Oak Lake Aquifer Management Plan through the Water Quality Protection Planning Group and the Monitoring Committee Action Group. Assistance was provided in the development of a Risk Based Livestock Protocol, and on mass mortality burial sites through CFIA Mass Mortalities Burial Sites Project. Information on groundwater protection and providing expertise needed to various other departments.

Information is provided to the general public and questions answered on a continuing basis, especially in regard to potential effects on groundwater from livestock operations.

Manitoba Rural Groundwater Quality Initiative

Water Quality Sampling/Reviews

Water quality sampling was completed in the network of sentinel wells to provide on-going data for the long-term monitoring of water quality in aquifers throughout the province.

A review of existing water quality information for the network of observation wells in the Assiniboine Delta Aquifer was completed to provide a better understanding of the current and historical change in water quality conditions within the aquifer.

Drainage Well Assessments

Assessments and recommendations for sealing were completed on a number of wells that were drilled for surface water drainage purposes.

Groundwater Protection Program - Red River Region

Groundwater protection work focused on activities that were directed towards future flood preparedness, aquifer protection and public awareness of water supply protection. Work activities completed during this fiscal period included:

- Private water wells located within the Red River Valley Designated Flood Area were inventoried and entered into the Provincial well record data base to provide an up-to-date record of wells for producing map based information to support an enhanced capability for future flood preparedness.
- 39 abandoned water wells were properly sealed to ensure protection of potable groundwater supplies from future flooding events.
- 35 0perational water wells deficient of proper construction or protection were upgraded to flood protection standards to provide a safe source of groundwater and prevent future flood water contamination of both the well and potable groundwater supply.
- A Fact Sheet has been developed to provide public awareness and education material on water supply protection. The publication provides a brief overview of water well basics and outlines good practices for protecting and maintaining a water well. Information on flood protection standards and flood preparedness for water wells located within areas of overland flooding such as the Red River Valley Designated Flood Area are also provided.

Cooperation with Other Government Departments and the Public

Ongoing support is being provided to the Office of Drinking Water on water quality issues. During this fiscal period, technical support was provided for groundwater-related investigations and/or follow-up work for the communities of Eden, Glenboro, Altamont, Birds Hill, Crystal City and Ninette.

A review of the status and condition of the drainage and observation wells installed in 1998 as part of the Lake Audy Drainage Project was completed for Transportation and Government Services.

Technical information is being provided to the Assiniboine Delta Aquifer Round Table as part of the development of an aquifer management plan for the Assiniboine Delta Aquifer.

Technical assistance was provided to the Water Strategy Legislation Task Team in the review of water legislation with regard to ***The Ground Water and Water Well Act***.

Table WM.9

12.4(b)5 Groundwater Management

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	841.9	16.00	972.4	(130.5)	
Total Other Expenditures	351.0		352.8	(1.8)	

Water Quality Management

The Water Quality Management Section assists to protect and rehabilitate aquatic ecosystems through the application of principles of sustainable development and the innovative management of risks by:

- Operating an ambient monitoring network on major streams, lakes and recreational beaches, assisted by volunteers, organizations such as Conservation Districts, and regional personnel.
- Conducting issue-based, site-specific studies, usually by intensive short-term sampling, to assess point and non-point source impacts from agriculture, mining, forestry, municipal discharges, and others.
- Supporting and participating in scientific studies to better understand impacts of human disturbance on ecosystem structure and function.
- Developing and recommending water quality standards, objectives, and guidelines to protect water quality and ecosystem integrity.
- Providing technical and scientific support to the Department, government, Clean Environment Commission, and others.
- Co-operating with neighbouring jurisdictions to protect water quality from upstream developments.
- Addressing non-point source pollution in partnership with volunteers, municipalities, and others.
- Educating volunteers and citizen groups to foster awareness and empower local stewardship. Activities include presentations and non-technical articles for newsletters.
- Reviewing proposals under ***The Environment Act*** and ***The Dangerous Goods Handling and Transportation Act***, and other technical documents or proposals.
- Leading aquatic ecosystem protection, including participating in local, provincial, regional, national, and international committees to address issues and to develop co-ordinated actions.
- Administering the *Canada-Manitoba Water Quality Monitoring Agreement*.
- Developing and implementing co-operative, proactive strategies to prevent invasion by zebra mussels and other foreign aquatic species.
- Contributing to sustainability reporting, including operation of ambient monitoring sites in several ecozones, database maintenance, and incorporation of community and ecosystem-level monitoring and reporting tools to provide information on sustainability indicators including the Canadian Council of Ministers of the Environment's *Canadian Water Quality Index*.
- Managing acquisition of on-going, high-quality laboratory analytical services for the department.
- Managing water quality data in a secure, user-friendly system that meets complex, on-going needs of the Section, Department, clients, and partners.

Priority Activities in 2002-03

- Completed the second year of the *Assiniboine River Study*. Information generated from this study will assist to ensure that existing and future development along Assiniboine River occurs in a sustainable manner. This work is being co-ordinated with studies being conducted by Cities of Brandon and Portage la Prairie.
- Developed and sustained partnerships with cottage-owner associations, lake and stream stewardship groups, Conservation Districts, municipalities, and other local authorities, to collect water quality information and develop co-operative, basin-wide approaches to maintaining and rehabilitating water quality. New partnerships were developed and most existing relationships were maintained.

- Ambient water quality monitoring activities continued at over 50 sites. Up to 100 water-quality variables were measured at most sites year-round, while bottom invertebrate community was assessed at about 25 sites. Both water chemistry and structure of the invertebrate community assist in determining ecosystem health. Data are requested by external stakeholders, and are used by the Department, for example, to determine assimilative capacity for discharge licensing under ***The Environment Act.***
- Water quality was monitored at 55 beaches and information was posted on the Department's Internet Webpage. Shoal Lake, source of Winnipeg's drinking water, was also monitored.
- Significant work continued on Manitoba's *Nutrient Management Strategy*. Artificial enrichment of streams and lakes with plant nutrients such as phosphorus and nitrogen is a major water quality issue. Virtually all human activities, including municipal and industrial discharges, agricultural activities, forestry, and discharges from cottages, play a role. The *Nutrient Management Strategy* will lead to more appropriate water quality objectives for prairie streams and receiving lakes such as Lake Winnipeg, and developing an implementation plan if reductions are required.
- Pursuant to the *Nutrient Management Strategy*, considerable water quality work on Lake Winnipeg was undertaken to better understand its condition, and develop a water quality model to assist managing nutrient inputs.
- Arising from the *Nutrient Management Strategy*, was the *Lake Winnipeg Action Plan*. This plan commits to reducing levels of nitrogen and phosphorus in Lake Winnipeg to those concentrations that existed prior to the 1970s. It identifies an initial set of actions to achieve this goal. In addition, the Lake Winnipeg Action Plan commits to establishing a Lake Winnipeg Stewardship Board to assist in implementing the Lake Winnipeg Action.
- As over 70% of Manitoba's surface water originates in other jurisdictions, the section plays a major role in ensuring that transboundary water quality is protected and of sufficiently good quality to meet our needs. The Section participates on such international committees as the International Joint Commission's International Red River Board and the Canada-United States Garrison Joint Technical Committee.
- Support is provided to oppose interbasin transfer of water and the threat posed by aquatic nuisance species from proposed Devils Lake outlet and Garrison Diversion Project.
- Continued to lead provincial participation in development of a Watershed Management Plan for Shoal Lake, source of Winnipeg's water supply, with Ontario, Canada, and five First Nations.
- Significant effort was dedicated to programs and co-ordinated efforts to prevent zebra mussel and other nuisance aquatic species from being introduced. The Section continued participation on executive committee of Western Regional Panel on Aquatic Nuisance Species and participated in 100th Meridian Project—a project to prevent zebra mussels from moving past the 100th Meridian, which transects North America east of Brandon. Supervised a number of students employed through STEP and Green Team to inspect boats and other equipment at major border crossings.
- Co-ordinated the department's acquisition of high quality analytical services to support our technical and scientific programs through the administration of contracts with two laboratories.
- Assisted implementation of Alberta's Environmental Management System for the Department. This complex data management system will manage the Section's half-million water-quality data records and provide access for staff through the Intranet.
- Co-ordinated the tracking and posting, where necessary, of beaches with reported cases of swimmer's itch.
- Provided significant input to the Provinces response to the threat from the West Nile Virus.
- Significant assistance was provided to develop the *Manitoba Water Strategy*.
- During 2002 - 2003, a final draft of the Manitoba Water Quality Standards, Objectives, and Guidelines was released for review and comment.
- Significant effort was expended on follow-up from the accidental discharge of raw sewage from the North End Water Pollution Control Centre in the City of Winnipeg in September 2002.
- Input was provided to Clean Environment Commission's public hearings on the City of Winnipeg's wastewater collection and treatment system.
- Technical advice was provided to the Lake Manitoba Regulation Review Advisory Committee on the water quality of Lake Manitoba.

Table WM.10 **Water Quality Management Activities**	**Number**
Water Quality Monitoring Studies	
Surface monitoring sites routinely operated for water chemistry	55
Surface monitoring sites routinely operated for indicators of biological health	25
Biomonitoring sites	4
Co-ordination of volunteer-operated monitoring sites	57
Co-ordination of volunteer-operated sampling of raw water supplies for toxic algae	1
Issue-based, site-specific studies	12
Co-ordination of monitoring at recreational beaches	55
Reports, Presentations, Scientific Reviews, Inquiries, etc.	
Preparation and contributions to technical and non-technical reports	12
Preparation of brochures	3
Presentations	28
Media interviews	45
Requests for data	144
Co-ordination or participation in workshops, public displays, etc.	11
Responses to telephone and e-mail inquiries from public, government agencies, consulting firms, etc.	14,571
Review and provide comments on proposals received under ***The Environment Act*** and ***The Dangerous Goods Transportation and Handling Act***, and other documents submitted for scientific review including proposals for funding through the *Sustainable Development Innovations Fund.*	225

Table WM.11

12.4(b)6 Water Quality Management

Expenditures by Sub-appropriation	**Actual 2002/03**	**Estimate 2002/03**		**Variance Over/(Under)**	**Expl. No.**
	$	**FTE**	**$**		
Total Salaries and Employee Benefits	425.9	7.00	428.6	(2.7)	
Total Other Expenditures	196.2		219.8	(23.6)	

Waterway Maintenance

Region engineering and Branch staff performed waterway maintenance activities under three categories: water allocation, flood-damage reduction, and waterway maintenance, including associated labour costs. Region staff operated dams to control flows as directed by the Branch, including maintaining facilities. Flood-damage reduction activities mitigated flood damages and maintained structures and equipment to ensure future service. Waterway maintenance activities maintained provincial waterways and crossings, primarily for the benefit of the agricultural sector. Region engineering staff also performed drainage licensing activities and enforcement under ***The Water Rights Act***.

Branch activities supported by waterway maintenance funding comprise a broad range of activities such as spring snow surveys, litigation, special studies for waterway maintenance and other water infrastructure projects including developing provincial standards, and monitoring safety of provincial dams. Issues identified by municipalities are addressed through a contingency fund. Cost of providing engineering data to government agencies, the public and the business sector is also funded under waterway maintenance.

Waterway maintenance funding also supported spring flood-fighting costs. In co-operation with Manitoba Intergovernmental Affairs, some additional critical waterway maintenance activities were performed.

Table WM.12
12.4(b)7 Waterway Maintenance

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Other Expenditures	3,837.9		4,000.0	(162.1)	

Parks and Natural Areas

The Branch is steward of Provincial Parks and Natural Areas, managing these lands for the long-term benefit of Manitobans and the environment. Provincial Parks protect unique and representative natural, cultural, and heritage resources, conserve ecosystems, and provide recreational and educational opportunities. The Branch has a prominent role in identification and establishment of other protected and natural areas.

Administration

The Administration Section is responsible for establishing priorities and guidelines, ensuring conformity to Department policies and government goals, and assessing the effectiveness of programs and products offered to the public. Administration provides many functions including administrative support, personnel duties, and the management of fees collected from Park users, commercial concessions, and leased properties. Work programs are reviewed to ensure that goals are met, and that expenditures conform to estimates, legislation, and policies. The Director of Parks and Natural Areas is the province's representative on the Canadian Heritage Rivers Board and the Canadian Parks Council.

Grants were provided to the International Peace Garden, Manitoba Wildlife Foundation (upkeep and public programs at Fort Whyte Centre for Environmental Education), and Federal-Provincial Parks Council (for the promotion and management of parks).

Table PA.1

12.4(c)1 Administration

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	430.3	5.00	355.4	74.9	
Other Expenditures	343.8		305.8	38.0	
Grant Assistance	191.2		191.2	0.0	
Total Other Expenditures	535.0		497.0	38.0	

Planning and Development

The Planning and Development Section prepares land-use plans, development plans, policies, and regulations to guide establishment, management, and development of the Park system, to:

- Conserve ecosystems and maintain biodiversity.
- Preserve unique and representative natural and cultural heritage resources.
- Provide outdoor recreation and education in a natural setting.

The Section guides establishment and management of Ecological Reserves, and leads the Protected Areas Initiative. The Initiative identifies and builds support for protection of lands that are representative of each natural region. The Canadian Heritage Rivers program is managed, as is co-ordination of provincial input to national park establishment initiatives.

Park System Planning

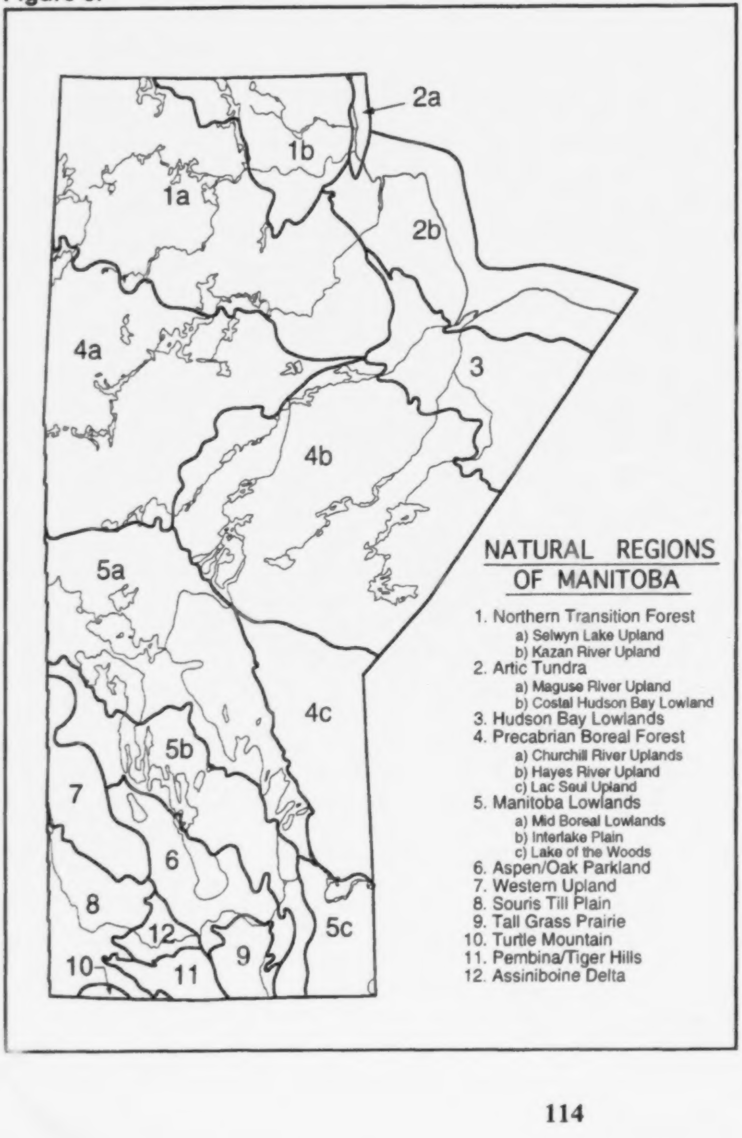
This program guides park use and management by working with the public to establish park boundaries, classify and identify the role of each park, and establish Park Land Use Categories. A major function is the public consultation processes required to convert Park Reserves to permanent provincial designations.

- Two Park Reserves were given permanent park status; Caribou River Wilderness Park: (representation/protection of Enduring Features representative of the Northern Transition Forest, includes Round Sand Lake and the Caribou River} and Trappist Monastery Heritage Park: (Trappist Monastery ruins, Metis culture, role in development of province and St. Norbert).
- East Paint Lake and Manigotagan River Park Reserves were extended for a further five years.
- Consultations were initiated regarding the future designations of the Manigotagan and Chitek Lake Park Reserves. Consultations on the proposed South Atikaki Provincial Park and the extension of Amisk Park Reserve were completed.

Protected Areas Initiative

This Program implements Manitoba's commitment to build a network of protected areas, representative of natural regions, guided by the *Action Plan for Manitoba's Network of Protected Areas*. By excluding timber harvesting, hydro-electric, mining, petroleum development, and other activities that significantly and adversely affect habitat, it is understood that biodiversity will be maintained. Areas of special interest have been identified in Natural Regions 1a, 1b, 2a, 2b, 3, 4a, 4b, 4c, 5a, 5b, and 5c. New areas of special interest will be identified for Natural Regions 6, 7, 8, 9, 10, 11 and 12. A geographic information system is used to identify and evaluate potential areas.

Figure 5.


2a
1b
1a
2b
4a
3
4b
5a
4c
5b
7
6
8
5c
12
9
10
11
NATURAL REGIONS OF MANITOBA
1. Northern Transition Forest
a) Selwyn Lake Upland
b) Kazan River Upland
2. Artic Tundra
a) Maguse River Upland
b) Costal Hudson Bay Lowland
3. Hudson Bay Lowlands
4. Precabrian Boreal Forest
a) Churchill River Uplands
b) Hayes River Upland
c) Lac Seul Upland
5. Manitoba Lowlands
a) Mid Boreal Lowlands
b) Interlake Plain
c) Lake of the Woods
6. Aspen/Oak Parkland
7. Western Upland
8. Souris Till Plain
9. Tall Grass Prairie
10. Turtle Mountain
11. Pembina/Tiger Hills
12. Assiniboine Delta

Protected Areas can include all or parts of Ecological Reserves, Parks, Wildlife Management Areas, and lands held by agencies, organizations, individuals, and Canada.

The Memorandum of Understanding with First Nations regarding the identification, establishment and management of protected areas concluded this year. However, Manitoba remains committed to the MOU and will continue to operate under the guidance of the memorandum while First Nation organizations and government continue to discuss a recommitment to this important document. The First Nations working group, established under the provisions of the MOU, continued to meet this past year to review progress on protected areas discussions with First Nation communities and to provide advise.

An *Action Plan for Manitoba's Network of Protected Areas* concluded this year with an intention to reissue a new Action Plan this coming year.

Important work continued this year with the Mining and Forestry industries, First Nation communities, and environmental organizations regarding protected areas. A departmental team conducted a study of a proposed protected area in the Bell/Steeprock portion of the Porcupine Mountains. Public consultations on this proposal are continuing. Additional areas were also supported for protection by the Forestry Sector in the southeastern portion of the province. Additional work needs to occur with affected First Nation communities prior to making protected areas decisions in the region. Ongoing work with the Mining Sector continues to identify more lands that could be designated as protected areas. To date 3.9 million ha. of lands have been identified by the Mining Sector for protected land status. Considerable work has been done this year to identify areas within Agro Manitoba that have potential to become protected areas. For example, in southwestern Manitoba, the Criddle/Vane Homestead Park Reserve was created and public meetings were held to determine the level of support for the addition of prairie lands to Rivers Provincial Park.

The Head of Manitoba's Protected Areas Initiative attended the National Congress on Protected Areas in Mexico in October to make a presentation to representatives of several Latin American countries on Manitoba's protected areas achievements. The trip was part of a bilateral trade agreement between Manitoba and the state of Jalisco, Mexico to exchange information and expertise.

Management Planning

The Provincial Parks Act requires creation of a management plan for each Park. Plans are working tools for managers in making decisions on major issues. Public involvement is integral to Plan preparation.

The preparation of the management plan for Atikaki Park and Bloodvein Canadian Heritage River entered its final stages with revisions to the draft plan based on the public input received in late 2001. The final plan will be reviewed within the Department and finalised in early 2003.

The management plan for Grand Beach Park was finalised and distributed, and implementation of the plan began.

The planning process for Duck Mountain Park continued with the distribution of a summary of public comments from the public drop-in sessions in late summer of 2001. Work began on the preparation of the draft plan which will be reviewed through a second round of public drop-in sessions in 2003.

Design and Development

This program provides development direction, capital budget management, site planning, and public facility design and mapping. Staff participated in the Watchable Wildlife Working Group with Wildlife and Tourism Development Branches, and in the Interdepartmental Recreational Trails Committee.

Major projects included:

- Development of preliminary recreation trails plan for Hecla/Grindstone Provincial Parks;
- Development of a comprehensive trail and trail signing system for Pembina Valley Provincial Park;
- Development of a commercial plaza and buildings for Grand Beach;

- Continued design of the South Whiteshell Trail;
- Design of a visitor kiosk and interpretive trail at West Hawk Lake;
- Detailed designs and commencement of construction for the Falcon Lake Waterfront ;
- Development of the Watchable Wildlife Program and design of a number of Watchable Wildlife viewing sites;
- Development of an RFP for an exploration into the tourism potential of the Research Range at Churchill;
- Preparation of development strategy for the Provincial Camping and Cottaging Initiative; and
- Summer and Winter Park maps were revised, printed and distributed. A number of campgrounds were field-checked for map accuracy.

Ecological Reserves

Ecological Reserves are established under ***The Ecological Reserves Act*** to protect areas with unique and representative plants, animals, geologic features, natural landscapes, and ecological processes.

The Ecological Reserves Advisory Committee, appointed under the Act, met six times to prioritise candidate sites and review nominations; four sites were recommended to the Minister for designation.

All nominations of proposed ecological reserves were circulated to the Branches and Regions of the Department of Conservation for review and comment. The responses were used to identify priority sites on which to focus consultations in 2003/04. Specific consultations with the forestry sector, nearby First Nations and the environmental community were conducted on two sites identified as possible ecological reserves in the Porcupine Mountain area, as part of broader protected area consultations. Consultations resumed with Brokenhead Ojibway First Nation on a proposed ecological reserve near the community. Discussion and community review of this proposal are expected to continue in 2003/04.

Canadian Heritage Rivers System

This program manages rivers that satisfy the System's criteria, applying national recognition to conserve and interpret outstanding heritage. The Seal and Bloodvein Rivers are designated Heritage Rivers, while the Hayes River is a candidate.

Management planning for Hayes River was initiated and the first round of public drop-in sessions held. A summary of public comments was prepared and distributed. Due to concerns raised by the minerals sector the public participation program was expanded to allow for more direct public involvement in the preparation of the plan. Preparation of the draft plan and its public review are planned for 2003. Completion of the plan will allow the Hayes River to be moved forward to full status as a Canadian Heritage River.

National Parks Initiative

The provincial and federal governments expressed renewed commitment to move forward on the Manitoba Lowlands National Park proposal. Much effort this year focussed on discussions between Parks Canada and Manitoba Conservation respecting possible boundary reconfigurations for the Long Point component of the proposed national park. Configurations are being developed to achieve greater ecological integrity while recognising other local and provincial economic development interests. Ongoing contact with First Nations communities and stakeholders was maintained.

Interpretation

The Program offers visitors a deeper understanding and appreciation of natural and cultural resources in Parks while assisting public understanding of goals and programs of the Department. Live field programs, complemented by publications, outdoor exhibits, and audio-visual materials, bring visitors in direct contact with Park resources and management.

Delivery of the field program includes a full-time interpreter at Birds Hill, and 21 seasonal (May-September) interpreters at Spruce Woods, Hecla/Grindstone, Birds Hill, Grand Beach, Whiteshell, St.

Norbert, St. Malo, Lockport, Paint Lake, and Turtle Mountain Provincial Parks. In addition, 18 Green Team members provided assistance at these Parks. Interpreters contacted 81,495 visitors at field programs and in interpretive centres and museums.

New design guidelines were incorporated for new and reprinted publications. Revisions and reprints included interpretive park maps for Whiteshell, Grand Beach, Grass River, Spruce Woods; interpretive trail guides for the Fire of '83, Ancient Beach, Forester's Footsteps, Pine Point, McGillivray Falls and Whiteshell River; and event posters for the Whiteshell. A new interpretive trail and activity guide was developed along with a new trailhead sign for Falcon Creek Self-guiding Trail.

On-site signage upgrades included the Grand Valley self-guiding trailhead and feature signs, Trapper Johnson's Cabin sign in Nopiming and Epinette Creek Trails' trailhead. New interpretive trailhead and feature signs were developed in a co-operative project with The Seton Centre, Inc. Three new interpretive signs were produced for the West Quarry picnic site in Hecla/Grindstone and 13 on-site signs were produced for the Dam Ruins Tour at Pinawa Dam Provincial Park. Orientation and directional signage was developed for the Grassy Narrows trail system in Hecla marsh.

Table PA.3

12.4(c)2 Planning and Development

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	892.6	16.00	916.2	(23.6)	
Total Other Expenditures	152.2		163.6	(11.4)	

Park Districts

Park Districts administers the Vacation Home Lot Program, commercial operations, and land use activities. An accounting system tracks costs of road maintenance, garbage handling, and water, sewer and other services to lessees, permittees and private landowners. Budgets were developed to determine service fee levels.

Vacation Home Program

The Program administers about 6,000 vacation homes on leased, permitted and private lands in Parks. 293 assignments and 120 collateral security recordings were processed, 213 leases were renewed and new leases issued, and 320 permits issued for cottage construction or structural modification. This program generated $4.7 million in revenue. 225 leasehold inspections were conducted. The Third Edition of *The Cottager's Handbook* was printed and distributed.

Commercial Operations

The Section manages relations with private-sector operators to ensure high-quality services for visitors. 167 commercial operations provide such services as restaurants, stores, accommodation, golf courses, marinas, and beach concessions. Also, 43 special-consideration organizations conduct educational and religious programs.

Land Use Activities

Permits were issued for commercial fishing, wild rice cultivation, trapline cabin construction, hay and grazing, scientific research, and mineral claim staking and exploration in provincial parks.

Table PA.3
12.4(c)3 Park Districts

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	376.3	8.00	373.1	3.2	
Total Other Expenditures	46.8		48.8	(2.0)	

Park Operations and Maintenance

Regional Operations Division operates and maintains Parks to provide high-quality, safe and enjoyable outdoor recreational and educational opportunities, while ensuring compliance with provincial laws.

Table PA.4
12.4(c)4 Park Operations and Maintenance

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	10,778.4	225.8	10,824.4	(46.0)	
Total Other Expenditures	4,315.7		4,397.4	(81.7)	

Support Services

The Section guides and supports Regional Operations in ensuring high-quality outdoor recreational experiences. This includes analysis of operating strategies and procedures, policy review, market research, marketing strategy development, promotion, and statistical compilation and trend evaluation. The section sets the direction of the outdoor recreation program in Manitoba Provincial Parks and designs, implements, and evaluates new initiatives in campground, day-use, and backcountry management, as well as customer-service training and volunteer activities.

Marketing

Initiatives included:

- Developing and implementing a comprehensive communication strategy for the parks program in conjunction with Manitoba Culture, Heritage and Tourism;
- Re-designing the *Provincial Parks Guide* to a smaller format to allow a cost-effective doubling of production to meet distribution needs. Increased distribution resulted in advertising interest in the publication;
- Reprinting a variety of publications including *Parks Reservation Service, Family Vacation Cabins, Fall Camping* brochures, Group Use and Volunteer Campground Host and Group Use;
- Advertising in *Woodall's North American Campground Directories* and the CAA Campbook; and
- Newspaper advertisements, news releases, and handouts promoted Park programs and initiatives, including opening and closing dates, May long-weekend liquor-free camping and Reservation Service.

Staff participated in provincial tourism committees and workshops to improve positioning in tourism strategies and promotional campaigns. The section participated in the Mid-Canada Boat and RV Shows to increase awareness of Parks and Park programs.

Outdoor Recreation Programs

About 5.1 million people visited Provincial Parks. 5,830 campsites were available, including about 4,287 transient sites (of which 2,605 or 59.9 percent were available for reservation), and 1,543 seasonal sites. 170,841 transient camping nights and 44,880 seasonal nights were recorded.

Parks Reservation Service placed more campers onto sites through reservation. 33,754 reservations were made, 1,000 (3.1%) over last year. Reservations were offered in 38 campgrounds, 25 group-use areas and two cabin locations.

New initiatives included:

- Implementing a comprehensive strategy for disabled accessible campsite development.
- Developing and implementing a comprehensive waterfront safety strategy for provincial parks addressing public communication, risk management, signage and contracted programming.
- Developing and implementing a new contract for the provision of call centre services associated with the Parks Reservation Service. Work was also initiated on expanding the service to include Internet Reservations.

Table PA.5

12.4(c)5 Support Services

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	263.5	6.00	291.8	(28.3)	
Total Other Expenditures	241.5		245.1	(3.6)	

Air Quality

To ensure the sustainable use of our air quality resources for the benefit of citizens today, while safeguarding these resources for future generations, the Section:

- Develops and reviews objectives and guidelines for air pollutants of concern,
- Monitors ambient (outdoor) air quality in urban areas and near selected industrial sources to measure adherence to objectives and guidelines,
- Undertakes special project investigations,
- Provides scientific and technical support to the Department, other agencies and the public,
- Prepares reports and evaluates peer reports,
- Assists in the review and assessment of developments and provides comments for environmental licensing,
- Participates in the development and implementation of national strategies, and
- Assists in the delivery of other departmental programs.

Table AQ.1
Air Quality Activities

Activity	Number
National Air Pollution Surveillance (NAPS) – number of urban stations operated	2
Monitoring industries with air emissions – number of stations operated	2[†]
Participation in regional/national air issues and strategies	8
Support to major Department priorities	3
The Environment Act** and **The Dangerous Goods Handling and Transportation Act Proposals/Licenses: Reviewed Comments provided	 39 / 22 10 / 4
Review of air dispersion modelling reports	8
Participation in standard development/implementation (Canada-wide Standards)	4
Requests for information (data, criteria, technical information, etc.) and presentations	13

[†] both sites operated with assistance from Regional Operations.

- Outdoor air quality monitoring continued at the established sites; drafting of the most recent multi-year report commenced with targeted completion for 2003/04.
- Federal/provincial/territorial negotiations on a formal Memorandum of Understanding for the operation of the National Air Pollution Surveillance (NAPS) program were completed; formal signing targeted for early fall of 2003/04.
- New replacement monitoring equipment for the NAPS program was received for a number of substances that are measured – most of these units were placed into network operation.
- Annual air quality statistics for the years 2000 and 2001 were determined and made publicly available, including on the department's web site. Release of the real-time hourly-updated air quality index (AQI) continued for the downtown Winnipeg site; planned streamlining of AQI operations still remains to be undertaken.
- Technical support was provided to the Department's review of its provincial sulphur dioxide management strategy.
- Canada-Wide Standards: participation continued in the provincial implementation of national standards for particulate matter, ozone, dioxins/furans and mercury and related standard development activities.
- The Department's Emergency Response Team was supported by assisting with the response function.
- Implementation of the Department's new environmental management system (EMS) was supported by the training of users.

Table AQ.2
12.4(d) Climate Change (Air Quality Management)

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Variance Over/(Under) $	Expl. No.
Total Salaries and Employee Benefits	271.4	5.0	237.1	34.3
Other Expenditures	91.2		71.5	19.7
Grant Assistance	2.2		2.8	(.6)
Total Other Expenditures	93.4		74.3	19.1

Forestry

Forestry Branch plans, manages and allocates forest resources for the long-term social, economic, and environmental benefit of Manitobans. Crown forests are managed sustainably for all users; harvest and renewal activities are implemented in a manner that conserves ecosystem diversity. The Branch encourages diversification and growth of the forest industry, emphasising efficient utilisation. To limit widespread tree mortality and timber losses, levels of protection are provided commensurate with social, economic, and environmental values at risk. The Branch advises and assists the public and industry in forest health and ecology for provincial Crown land, private woodlots and urban forests.

Forestry Branch oversees activity effectiveness to meet goals, reviews Forest Management Plans, and guides and informs Region managers and enforcement personnel on policies and procedures. The Branch provides a grant to the Manitoba Forestry Association and administers a Sustainable Development Innovations Fund grant for the Manitoba Habitat Heritage Corporation's agro-woodlot program.

The Forestry Branch Website continued to be expanded. Several sections were updated and PDF versions of branch reports and forest practices guidelines were put on-line. The Branch also completed several projects with the Canadian Forest Service, Northern Forestry Centre, with the publication of primary and secondary wood users directories and an updated version of the *Manitoba's Forests* publication. Staff worked with Manitoba Forestry Association to deliver an environmental education competition, Envirothon.

Participation continued on the advisory committee for Manitoba Hydro's Forest Enhancement Program. This committee provides direction on an annual allocation of over $340,000 to community and non-profit tree planting, research, and forest education.

The Manitoba Model Forest was supported by in-kind contributions, including two representatives who sit as Directors. The Department continued to participate in the Canadian Forest Service's First Nations Forestry Program. A team comprised of First Nation's organisations, industry and government (federal and provincial) delivers this program, funded by the Federal government.

The Branch provided a grant of $130,000 to the Manitoba Forestry Association woodlot program for services including the development of management plans and technology transfer. The Branch also continued to support the Manitoba Habitat Heritage Corporation's agro-woodlot program in south-western Manitoba by providing a forester to manage the program and administer the sustainable Development Innovations Fund grant of $312,400.

Administration

Branch administration establishes guidelines and ensures conformity to Department policies and government goals. It provides administrative support and personnel duties, prepares annual estimates, ensures expenditures conform to estimates and Department policy, controls funds, monitors efficiency and effectiveness of expenditures, and coordinates development of the annual work plan.

Table FO.1

12.4(e)1 Administration

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl No.
	$	FTE	$		
Total Salaries and Employee Benefits	354.0	8.00	359.1	(5.1)	
Other Expenditures	368.7		370.8	(2.1)	
Grant Assistance	153.4		153.4	0.0	
Total Other Expenditures	522.1		524.2	2.1	

Forest Inventory and Resource Analysis

As part of its forest management stewardship responsibilities, the Forestry Branch calculates and manages harvest levels (Annual Allowable Cut) for the entire province. The Section maps and determines type and productivity of forest stands, and tracks changes due to fire, harvesting and other impacts. Timber harvest is managed by setting harvest levels and planning requirements, and is delivered by Regional staff through plan approvals, enforcement, and inspections.

The Forest Inventory program also has the responsibility to develop and maintain a database and digital geographic information system for Provincial Forest Resource Inventory. Forest fires that occurred in Manitoba's forested landbase in 2002 and eastern regions depletion files were digitized for entry into Manitoba's digital database. The Section responded to information requests including the distribution of digital and hard copy Forest Inventory information from Department staff, industry, consultants, academics, and the public. The GIS server was replaced and the branch updated several software applications and related workstations. Software maintenance of the Geographic Information System continued to ensure effective management of the Forest Resource Inventory (FRI) database, and resource evaluations.

The Branch implemented the second year of a three-year agreement with Louisiana Pacific Canada Ltd. to complete a new Forest Lands Inventory for the Duck and Porcupine Provincial Forests (Mountain Forest Section). Using satellite imagery, timber harvesting & fire depletions were also captured for Forest Management Unit's (FMU) 13 & 14.

A new forest inventory was completed and timber volume sampling was initiated in FMU's 20 & 23 in southeast Manitoba. The Branch also commenced photo-interpretation in FMU 30 to support a new forest inventory in this area.

Wood Supply Impact Assessment(s) were completed on the proposed Federal Low Lands National Park, Manigotagan River buffer extension and the Parks Protected Area(s) Initiative in Forest Management Unit 14.

Departmental staff working in the Forest Productivity group re-measured 32 permanent sample plots, established 4 new plots and developed ecologically-based taper equations in partnership with the University of Winnipeg for use in the provincial growth & yield program.

In conjunction with the Forest Lands Inventory Technical Advisory Committee, the provincial inventory specifications were revised and a framework to update forest inventories was also developed.

The Branch established technical advisory committee(s) with Louisiana-Pacific Canada Ltd., Tembec and Manitoba Quota Holders to participate in determining wood supply(s) for Forest Management License Agreement Holders 1 & 3. Technical advisory committees were involved in providing information to update forest inventories, defining updating operable landbase(s) and identifying constraints to wood supply modelling. The forest productivity group completed a detailed analysis to determine which height/diameter model(s) work best to estimate tree height in FMU's 13 &14. This data will be used to develop volume yield curves in subsequent forest modelling analysis.

A Memorandum of Understanding was negotiated with Forestry Canada to establish a series of long term ecosystem monitoring plots in Manitoba to measure provincial, national & international reporting requirements related to forest sustainability and climate change.

A new Wood Supply Forester & GIS Analyst were recruited from outside the province to support the resource analysis group.

Table FO.2

12.4(e)2 Forest Inventory and Resource Analysis

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	832.2	17.00	835.7	(3.5)	
Total Other Expenditures	707.2		824.8	(117.6)	

Forest Health and Renewal

The Section protects forests from damage by insects, disease and other factors, assists wildfire management, ensures all harvested Crown forest land is renewed to maintain ecosystem integrity and biodiversity, and advises and assists the public and industry on forest health and renewal.

The Forest Renewal Program (delivered by Regional Operations) is administered and co-ordinated by this section. The Department and industry carried out forest renewal treatments on 9,950 hectares, including re-treatments. Most of the area was planted (13.3 million trees), with scarification to promote natural regeneration on the rest. Except for some Department planting in Eastern Region and a non-tendered contract to a First Nation, delivery was through tendered contracts.

Of 14,850 hectares harvested in 2000-2001, 39% (5,741 ha) were treated for reforestation in 2002, and the rest left to regenerate naturally or be treated in future. Expanding harvest of poplar (about 30% of harvested area over past five years) increased area left to regenerate naturally, as poplar regenerates readily from root suckering. About 155 hectares of harvested area that had not restocked sufficiently was retreated by planting.

The Section maintains the pool of site-preparation equipment and co-ordinates use with Regional Operations. Renewal technology transfer to Region staff is provided through field trials and promoting innovation. Regional renewal programs are also supported through administration and co-ordination of silviculture contracts and assisting planning and delivery of vegetation management projects. The Manitoba Silviculture Technical Committee (MbSTC) comprised of government and industry foresters and technicians was created to exchange ideas and solutions and provide technology transfer.

Tembec/Pine Falls Paper and Tolko Manitoba hired contract surveyors for regeneration surveys, and staff to check survey results. Louisiana-Pacific utilizes company staff to survey. The Section tested Branch, contract, and company surveyors. Tembec completed surveys with three individuals, Tolko had five, Louisiana-Pacific had three, and the Department had six. All obtained Regeneration Surveyor Licenses. An audit of Tembec, Tolko and Louisiana-Pacific surveys and check surveys was successful, and Certificates of Reforestation were issued. A re-certification program was implemented for surveyors who were licensed the preceding year.

Regeneration surveys to determine success of forest renewal were performed on 11,903 hectares. The Branch surveyed 4,634 hectares while licensed regeneration surveyors from Tolko surveyed 1,699 hectares, Louisiana-Pacific surveyed 1,626 hectares, and Tembec surveyed 3,944 hectares.

The Branch performed Free-to-Grow (FTG) surveys on softwood-dominated forest stands to determine if they are developing appropriately (i.e. surpassing competing tree species in height within 15-20 years of age). Two techniques were used, full and extensive. Full-survey technique was used on 1,793 hectares and extensive technique on 1,057 hectares. Branch Staff trained surveyors from Tembec to perform FTG surveys, which they then conducted on 2,213 hectares. Tolko is scheduled to commence FTG Surveys in 2003, and Louisiana-Pacific in 2008.

Surveys, efficacy tests, and research on significant insects and diseases were conducted. Significant pests included spruce budworm, jack pine budworm, elm bark beetles, forest tent caterpillars, dwarf mistletoe, western gall rust, armillaria root rot, and pine root collar weevil. Forest health data was collected in regeneration, FTG, and pre-harvest surveys, to develop management prescriptions, and track substantially infected stands.

Spruce budworm infested about 111,480 hectares. About 15,407 hectares of spruce/fir were moderately to severely defoliated in Tembec's Forest Management License Area (FMLA), and in Nopiming, Whiteshell, and Hecla Provincial Parks. There was no defoliation mapped in Duck Mountain Provincial Forest, in Louisiana-Pacific's FMLA. Infestation in the Northwest, in Tolko's FMLA, decreased slightly to 90,499 hectares. The outbreak in Spruce Woods increased to 5,574 hectares. Emergency funding was provided to enable spraying biological insecticide, Mimic, on 17,538 hectares in Athapapuskow Lake area (Tolko). Jack pine budworm populations remained low.

Dutch elm disease (DED) management seeks to reduce annual mortality to 3% or less by cost-shared agreements with municipal governments. Major urban centres with cost-sharing agreements are Brandon, Portage la Prairie, Morden, Winkler, Dauphin, Steinbach, and Selkirk. As of March 31, 2003, 9,517 elms were removed from 38 cost-share communities and seven urban-buffer-zone municipalities. Due to excellent working conditions through winter, crews removed the backlog (removals are up-to-date for the first time in several years). There were 9,427 elms marked for removal in cost-share communities and the Winnipeg buffer zone (which, through emergency funding, was expanded). High levels of DED persist along rivers, especially the Red, Assiniboine, Boyne (near Carman), and Souris Rivers.

The Dutch elm disease (DED) program implemented the first phase of UFIS (Urban Forestry Information System) in May 2003. UFIS, which was developed by a team of six University of Winnipeg Business Computing students, is a sophisticated data base system that is designed for tracking diseases and pests in urban forests. It will be used for tracking of DED surveys and tree removals and elm firewood in the Manitoba communities participating in the DED management program. The outstanding feature of this system is its ability to record the geographical position of each incidence of DED. Spatial data is crucial in tracking and analysing the spread of DED over time, and will be used for assessing and further refinement of existing strategies to combat this lethal disease of elm trees.

The City of Winnipeg Forestry Branch, the University of Manitoba Dept. of Entomology, and Manitoba Conservation Forestry Branch are collaborating on a DED research project. The project will study the breeding habits of native elm bark beetle on recently symptomatic elm trees and how this affects the potential of the rapid removal method as a DED management tool. The project also will assess pesticides that could be used as alternatives to chlorpyrifos for use in basal bark treatment for managing over-wintering native elm bark beetles (*Hylurgopinus rufipes*), which is the main vector for DED in Manitoba. This research project is in the planning stage. Currently, Forestry Branch is looking for support to fund this project.

Severe defoliation by the forest tent caterpillar was predicted for much of southeastern Manitoba in 2002. However, defoliation was generally light with only localised patches of severe defoliation occurring. The cold wet weather, which occurred for a number of days during the larval hatching period, is believed to have caused widespread larval mortality. The only area of the Province that experienced widespread severe defoliation was in the Western Region in the south portion of Duck Mountain Provincial Forest, Asessippi Provincial Park and in the Roblin, Rossburn and Grandview areas. A fall egg band survey was carried out to predict forest tent caterpillar defoliation in 2003. Light defoliation is predicted in southeastern Manitoba, Lake Winnipeg East and the Interlake area. Moderate or severe defoliation is only predicted in the Rossburn, Roblin and Asessippi Park areas of western Manitoba.

Measurement of softwood decay was continued to develop cull factors for growth and yield models.

Fire Program is assisted by identifying values at risk, reviewing Forest Management Licensees' annual fire control plans, and participating in the Canadian Forest Service's National Fire Database mapping.

Table FO.3
Forest Renewal Activities

	Manitoba Conservation	Tembec/ Pine Falls	Tolko Manitoba	Louisiana-Pacific	Total
Area Treated (hectares)	1,745	732	5,665	1,808	9,950
Area Retreated (hectares)	35	0	120	0	155
Total Treated Areas	1,780	732	5,785	1,808	10,105
Total Trees Planted (1000s)	2,582	1,450	7,127	2,108	13,267
Total Area Site Prepared for Renewal Treatment (hectares)	743	375	4,352	100	5,570
Total Area Tended (hectares)	89	87	0	0	176
Total Cones Collected (hectolitres) - % from Tree Improvement Orchards	51 22%	10 40%	28 0%	5 100%	94

The objectives of the Tree Improvement Program are to provide a genetically improved seed source for reforestation, and to ensure the conservation of the forest genetic resource. The program consists of seven government/industry co-operatives with Tolko Manitoba, LP Canada and Tembec, and six provincial programs. There are currently 14 seed orchards (62.9 hectares - over 175,000 trees) and 27 family tests (83.3 hectares – over 191,000 trees) across the province. Improved jack pine seed is available in three breeding zones. The first operational cone collection from the white spruce seed orchard for the Mountain breeding zone was conducted in the fall of 2002 producing 12.75 hectoliters or 6 million improved seeds. Improved white spruce seed will also soon be available for the Saskatchewan River breeding zone. Improved black spruce seed is available for the Lake Winnipeg East zone and will soon be available for another two zones. A white spruce Seed Production Area was established in the eastern region to provide better quality seed. Discussions on incorporating genetic gain into the AAC were initiated with industry and the Forestry Branch.

The Section co-operated on a study with University of Winnipeg Centre for Interdisciplinary Forest Research and Tembec to compare effects of harvest and natural disturbance on biodiversity, using arthropod indicators.

The Tree Improvement Program consists of eight industry co-operatives with Tolko, Louisiana Pacific, and Tembec and six provincial programs. 13 seed orchards, (69.5 hectares.), and 24 family tests (83.1 hectares.) have been established. Improved jack pine seed is available in three breeding zones, and improved seed will soon be available from two black spruce and one white spruce seed orchards.

Table FO.4
12.4(e)3 Forest Health and Renewal

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	2,426.9	23.06	1,753.6	673.3	
Total Other Expenditures	2,858.7		3,663.3	(804.6)	
Less: Recoverable from Rural Economic Development Initiatives	(1,308.7)		(1,292.0)	(16.7)	

Forest Management and Development

The Section provides direction to regional forestry offices and forestry companies in Manitoba on forest management and forest industry development. Together with companies granted Forest Management Licences, Manitoba Conservation manages forested Crown land to ensure timber harvesting and other forest practices are sustainable and consistent with provincial legislation, policies and guidelines. The section supports the existing forest industry and promotes new forestry developments. Manitoba's primary forest industry employs about 10,000 people directly and indirectly.

Forest Industry

The 3 FML Annual Reports from LP, Tembec and Tolko indicated that 1,396,877 m^3 were harvested by the FMLs.
Timber Sale Agreements and Timber Permits authorised the harvest of another 709,085 m^3 by Quota Holders and other parties for a total provincial harvest of 2,105,962 m^3. Total Revenue collected was $7,579,613 of which 66% was for Stumpage (the cost of timber on the stump).

LP Swan Valley Resources Division successfully passed an independent audit of their operations and received certification from the Sustainable Forestry Initiative.

Tembec commenced a process of establishing Traditional Area Advisory Committees with First Nations in Eastern Manitoba. The committees will discuss opportunities for involvement in operations, develop mutually acceptable ground rules, and participate in planning by exchanging information, concerns, traditional ecological knowledge.

With the support of Manitoba Conservation the Chemawawin Cree Nation and Tolko Industries Ltd., Manitoba Solid Wood Division entered into a Partnership Arrangement for management and harvesting of timber in portions of the Interlake Forest Section previously part of Tolko's Southern Area. The arrangement will continue until March 2004 by which time an assessment of the success of the partnership will be conducted and a long-term agreement considered.

Planning

Branch and section staff participated in a National Forest Strategy workshop co-ordinated by the Canadian Forest Service at the Fort Garry Hotel in Winnipeg.

Forest Management Licensees (Tembec, Louisiana Pacific, and Tolko Manitoba) submitted annual Operating Plans for approval.

The Manitoba government deleted the "Southern Area" of Tolko's Forest Management Licence Area in accordance with the terms of the December, 1998 agreement between Repap and the province. Future decisions regarding the allocation of timber and management responsibilities in the area await a wood supply analysis of the area. In the interim, at the province's request, the Mountain Quota Holders Association developed a three-year Operating Plan and has applied for an Environmental Licence to cover remaining forestry operations at existing levels.

Branch and section staff participated with LP Swan River Resources Division regarding the development of a long term Forest Management Plan to be completed by 2005.

Practices

The Forest Practices Committee comprised of representatives from other branches and forest industry continued to develop guidelines for forestry practices. Two guidelines on *Pre-Harvest Surveys* and *Protection of Softwood Understorey in Mixedwood and Hardwood Forests* were published and placed on a newly established website while work continued on guidebooks related to *Forest Roads* and *Brush Disposal*. These guidelines will link policy, regulations, operations, and inspections. Various forest practices throughout Manitoba were inspected and reviewed with Regional Operations and forest companies.

Three trials involving forest practices were conducted in 2002. A flexible utilisation trial to top harvested trees at diameters between 3" and 4" was allowed in selected Forest Management Units in northern Manitoba. A roadside limbing trial was permitted in conjunction with the flexible utilisation trial to determine if alternative methods of limbing trees and disposing of the debris could be used that would be as beneficial as limbing in the bush.

A chipperwood trial was established in western Manitoba to provide an incentive to harvest unmerchantable and small diameter softwood timber for the production of chips for the pulp and paper industry.

Forestry Branch Circulars, which describe forest policy for regional staff, forest operator and company forest managers were updated. Two new circulars were introduced detailing the annual review of Operating Plans submitted by FMLs, and the approval process for Annual Operating Plan Amendment requests.

Check Scaling was conducted at all major timber manufacturing facilities in Manitoba. The check scale did not find any irregularities in wood measurement practices.

Development

The section presented the preliminary findings of the stumpage system review to the Forest Industry Association of Manitoba (FIAM) in November. The consultants continued working on the stumpage review incorporating the feedback from FIAM.

The Branch worked with Manitoba Industry, Trade and Mines to represent Manitoba in the U.S. Department of Commerce's countervail investigation of softwood lumber imports from Canada. The Branch provided questionnaire responses, co-ordinated the company exclusion process, and participated in bilateral discussions to find a non-litigated solution to the trade dispute.

The Branch worked with regional staff to provide several First Nations with direct community allocations to assist in developing forestry businesses and training programs.

The Section responded to numerous inquiries about forest industry development opportunities. Interested parties ranged from local operators wanting to expand business, to European multi-nationals investigating wood availability. Manitoba has hardwood (primarily aspen) resources that could support development, particularly in the north, through Aboriginal partnerships.

Tembec continued negotiations on a joint sawmill/woodlands venture with a consortium of First Nation communities from the Interlake and east of Lake Winnipeg. The softwood lumber trade dispute has delayed this project temporarily.

Palliser Furniture's special allocation has been renewed for an additional 5-year period. The extension included a new provision for Palliser Furniture to form partnerships with First Nations in the Interlake to harvest or market a portion of the allocation.

Table FO.5

12.4(e)4 Forest Management and Development

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	507.5	9.0	506.8	0.7	
Total Other Expenditures	33.8		37.0	(3.2)	

Forest Regeneration Stock

2.69 million seedlings were purchased for planting by Manitoba Conservation in 2002/2003, and 2.94 million were grown for planting in 2003/2004. Another 3.56 million seedlings were purchased for planting by Tembec, and Louisiana Pacific in 2002/2003,and 3.06 million were grown for planting in 2003/2004. All stock is grown at Pineland Forest Nursery (Tolko purchases seedlings independently). This appropriation is also used for seed collection, extraction and storage, transporting seedlings to the field and a stock identification system.

Table FO.6

12.4(e)5 Forest Regeneration Stock

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Other Expenditures	1,580.3		1,411.9	168.4	

Fisheries

Fisheries Branch ensures sustainable development of fisheries resources. Management programs are developed to provide greatest benefits to Manitobans, by maintaining or enhancing populations and habitat, monitoring harvest and habitat alterations, and allocating resources for best return. The Branch directs and reports on programs and budgets, legislation and policy, standards and guidelines, and co-ordination and monitoring. The Branch also administers the Northern Fishermen's Freight Assistance Program.

Programs are implemented by regional staff: Regional Fisheries Managers, under Operations Division, report to Regional Directors responsible for operational decision-making and program delivery.

Winnipeg's Urban Angling Partnership, comprising Mid-Canada Marine Dealers Association, Manitoba Wildlife Federation, Fish Futures Inc, *The Complete Angler*, City of Winnipeg, and government of Manitoba, expanded a number of programs. Opportunities provided for residents and visitors to participate in recreational angling included:

- Learn to Fish Clinics,
- Winnipeg Fish Festival,
- Fish Winnipeg Media/Corporate Challenge (monies raised for youth angling programs),
- Urban Fishing Derby, and
- Catfish Hunter Initiative (in co-operation with Winnipeg Goldeyes baseball team).

Working in partnership with Manitoba Wildlife Federation, Mid-Canada Marine Dealers Association, Manitoba Recreation Connections and Berkley Canada, Manitoba's Recreational Fishing League completed another successful year. The league is designed to provide Manitoba youth with an opportunity to enjoy a recreational angling experience and learn about the environment around them.

Work continued on development of a Sustainable Development Website to integrate sustainable development concepts into the new Kindergarten - Senior IV *Science: Manitoba Curriculum Framework of Outcomes*. The site is a Manitoba first in integrating fisheries management information into a science curriculum via the Internet. The site was promoted at teacher workshops and conferences, including the Special Areas Group (Science) workshop. Work will continue with educators to develop exercises for Grades S1 to and Senior IV for implementation in fall 2003.

The third phase of the Fisheries Information Corporate Database was completed. The system will provide staff with efficient and effective access to fisheries information. Continued development will incorporate remaining databases.

The Ecosystems Based Management (EBM) Pilot Project in the Lac Seul Upland ecoregion on the east of Lake Winnipeg was completed with release of the *Science Team Final Report* and the *Executive Summary* in October 2002. Three reports were released earlier: *Socio-economic Study*, *Land Use Studies*, and *Values Team Final Report*. The significant information/databases generated should be of great benefit for the Department's planning east of Lake Winnipeg.

At Whiteshell Fish Hatchery, the Visitor Centre was in its second year of operation. Park interpreters staffed the building and gave tours to over 4,100 people from May to the September long weekend. The Centre provides a sheltered area to begin tours, washrooms, and drinking water. Interpretative exhibits include information on species reared at the Hatchery, life stages of fish, how water is used, history of the Hatchery, and ecosystem interaction.

The Branch continued to participate in the national Recreational Fishing Task Group and co-chair the national Freshwater Fish Strategy Task Group. These Groups, reporting to Canadian Council of Fisheries and Aquaculture Ministers, are developing co-ordinated action plans that involve stakeholders and maximize management efficiency and effectiveness.

Administration

This section provides annual estimates, financial and personnel services, and administrative support.

Table FI.1
12.4(f)1 Administration

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	128.6	2.00	126.2	2.4	
Total Other Expenditures	200.3		153.9	46.4	

Fish Culture

Stocking programs create new self-sustaining fisheries, maintain and enhance fisheries where natural reproduction fails or winterkill occurs, and introduce species. Fish are produced at Whiteshell and Grand Rapids Hatcheries, the latter co-funded by Manitoba Hydro. A seasonal walleye hatchery is operated at Swan Creek, near Lundar on Lake Manitoba.

In 2002, the Swan Creek Hatchery hatched 45.1 million walleye fry, including 3.2 million eggs that were received from Falcon Creek Spawn Camp. 31.65 million fry were distributed to Interlake Region sport and commercial fishery lakes and Lake Winnipegosis (5 million). The sportfishing lakes in the Western and Southwestern Regions received 10 million fry from Swan Creek.

At Whiteshell Hatchery, 9.36 million walleye fry were hatched from eggs collected at Falcon Creek. These walleye fry were distributed to 35 sportfishing lakes and rearing ponds in the East/Southeastern Region.

Grand Rapids Hatchery satellite spawn camps at Basket Creek at north end of Lake Manitoba, and Birch Bay Drain near Lake St. Martin, produced 16.4 million fry. There is an obligation under the Grand Rapids Hatchery co-funding agreement with Manitoba Hydro to stock the Saskatchewan River at Grand Rapids, where Hydro seeks to re-establish a self-sustaining walleye population. Green eggs (200,000) and eyed eggs (1,000,000) as well as fry (12.85 million) were stocked into Saskatchewan River spillway channel at Grand Rapids. Replacement stocking to Basket/Powderhorn Creeks and Birch Bay Drain totalled 2.0 million fry.

A volunteer spawn camp brought eggs to Grand Rapids Hatchery from the Overflowing River at the northwest end of Lake Winnipegosis (4.3 million). Fry (1.2 million) from Overflowing River were stocked back into Lake Winnipegosis at the Overflowing and Steeprock Rivers.

Grand Rapids Hatchery received eggs from two sturgeon captured in Landing River where it enters Nelson River, which produced 3,362 fingerlings. These were stocked back into the Nelson River to enhance stocks, and 100 were used in educational aquaria in Manitoba and Saskatchewan.

480,000 whitefish fry hatched at Grand Rapids Hatchery from eggs from Lake St. Martin in the fall of 2001. These fry were stocked in the Saskatchewan River at Grand Rapids after hatching in the spring of 2002.

Trout and char were produced at Whiteshell and Grand Rapids Hatcheries. Species raised at Grand Rapids included lake trout, splake, brook trout, and rainbow trout. Lake trout, splake, brook trout and rainbow trout fingerlings were raised over the winter at Grand Rapids. Species raised at Whiteshell Hatchery included rainbow trout, brook trout, brown trout, Arctic char, Arctic char and brook trout hybrid.

The Section continued assisting volunteer organizations to enhance local stocks. Groups at Lonely Lake Drain, Lynchs Point, Mantago River, Overflowing River and Winnipegosis were involved in walleye spawn collection and/or incubation projects.

Table FI.2
Distribution to Sport Fishing Waters from Fish Hatcheries

Species	Fry and Eggs	Fish <18cm long	Fish ≥18cm long
Char X Brook Hybrid	0	18,000	0
Brook Trout	0	153,800	15,340
Brown Trout	0	237,000	0
Lake Trout	0	339,375	0
Rainbow Trout	0	209,200	51,063
Splake	0	56,000	0
Walleye	20,983,370	3,589	0

(Excludes stocking to waterbodies with both sport and commercial fishing, such as Lake Manitoba.)

Table FI.3
12.4(f)2 Fish Culture

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	646.6	15.19	661.3	(14.7)	
Total Other Expenditures	193.1		227.4	(34.3)	

Fisheries Habitat Management

The Section supports conservation, evaluation, restoration, and enhancement of fish habitat to achieve a net gain in healthy, productive fish habitats and stocks.

The Section reviews proposed developments that may affect surface waters, fish, and habitat, and recommends measures for mitigating or avoiding adverse impacts. Sixty-seven proposals were reviewed under ***The Environment Act***, ranging from water-treatment plants, wastewater treatment lagoons, and land disposal of sludge, to mine developments or closures, food processing plants, crop protection warehouses, rural water pipelines, oil and gas pipelines, winter road relocation, industrial facilities and forest company operating plans. One hundred and ninety-six other proposals were reviewed: 61 Land Sale/Lease/Permit applications, 69 municipal development plans/amendments/zoning bylaws, 24 miscellaneous, 32 pre-licensing environmental screening, 4 dangerous goods and transportation handling, 4 draft licences, and 2 draft *Environmental Impact Assessment Guideline* reviews.

The proposed outlet plan to release water from Devil's Lake, North Dakota into the Red River system continued to raise concerns. Manitoba Conservation's comments, including those fisheries issues identified by the Section, on the U.S. Army Corps of Engineers' (USACE) *Draft Integrated Planning Report and Environmental Impact Statement* for the project were submitted. In response, USACE along with the U.S. Fish and Wildlife Service conducted a survey for fish pathogens in fish captured in Devils Lake and the Sheyenne and Red rivers. The subsequent report was reviewed and comments/concerns submitted to USACE.

Manitoba Hydro moved forward with plans to build Wuskwatim Generating station on the Burntwood River and the associated transmission network. Draft guidelines for environmental impact statements (EISs) for each were submitted by Hydro and reviewed by the Section to ensure that fisheries concerns will be included in the final EISs.

In continuing to address concerns with planned introductions of aquatic organisms, the Section began implementing the *National Code on Introductions and Transfers of Aquatic Organisms* and continued to represent Manitoba on the Federal/Provincial/Territorial Task Group working to refine the *Code*. The Section also represented Manitoba on a new Task Group on Aquatic Invasive Species created by the Canadian Council of Fisheries and Aquaculture Ministers in September. This Task Group is charged with developing a national plan to address the threat of vectors not covered under the *Code*, including the aquarium and aqua-garden trade, live bait, live aquatic food, recreational boating, shipping, and unauthorized introductions and transfers.

The Section continued to work toward protection of endangered aquatic species in Manitoba by working with the Federally appointed Committee On the Status of Endangered Wildlife in Canada (COSEWIC) and Manitoba's own Endangered Species Advisory Committee (ESAC). In the past year COSEWIC designated the Manitoba population of rosyface shiner as "threatened", which will afford it special protection under the new Canadian ***Species At Risk Act***. Similarly, in March of 2003, ESAC reviewed four aquatic species and made recommendations to the minister that he designate the rosyface shiner and the northern brook lamprey as "threatened", and the shortjaw cisco as "vulnerable", under Manitoba's ***Endangered Species Act***.

Instream flow issues continue to be significant. As development continues along the Assiniboine River, establishing instream flow reservations for protection of fish, fish habitat and ecosystem health is a high priority. A committee, led by Section staff, from Manitoba Conservation, Fisheries and Oceans Canada, and University of Manitoba continues work to determine the magnitude, frequency, timing and duration of water required to meet the needs of the aquatic ecosystem and the organisms that depend on it. Data collected to determine water elevations required for filling the channel to bankfull and connect oxbows to the mainstem were analysed and converted to flows. These flows were compared to historic flow regimes to assess the impact of regulation. Representative fish species and lifestages were selected to develop flow/habitat relationships at four sites along the river. These relationships are being incorporated into the instream flow recommendation along with requirements for channel forming and oxbow flows.

The Section leads developing drainage guidelines to meet the needs of the Canada ***Fisheries Act***. There is a lack of a common, clear understanding of habitat protection requirements (technical requirements and process) in waterway maintenance, construction and reconstruction. These guidelines will ensure all resource interests are accommodated during all phases of waterway maintenance projects where Manitoba, Rural Municipalities, or Conservation Districts are proponents. A committee of Fisheries and Oceans Canada biologists and Department staff will create a comprehensive, but simple, process to guide all parties through pre-planning, planning, fieldwork and follow-up phases of waterway maintenance. This Committee will also establish design and construction guidelines for maintenance to ensure that pre-alteration ecological functions are sustained.

The denil fishway at Grant's Old Mill on Sturgeon Creek was retrofitted with a fishtrap and fish passage is being monitored. Even during extremely low spring flows fish were passing through the fishway. A Sturgeon Creek Watershed Management Plan was completed by Carolyne Northover, a graduate student from the University of Calgary who was supervised by Section staff. Bioengineering techniques are being planned with rock armouring to stabilize and revegetate eroded banks to a more natural state.

The section continues to provide co-ordination and planning assistance for a number of watershed/stream restoration projects in Manitoba. An integrated planning approach joins local stakeholder groups and agencies in restoring the health and functions of watersheds. Project work includes in-depth aerial and ground truthing surveys to determine land use practises and natural functions impacting the health of the watershed. Site specific project sites are also identified which require mitigation work to protect and enhance valuable watershed components such as water quality and fish and wildlife habitat. The implementation and monitoring of site-specific project work are the next phases that are addressed in these long-term watershed restoration programs. Watershed initiatives are continuing on the Brokenhead, Valley, and Upper Whitemud Rivers, and selective tributaries on the east side of Lake Manitoba (north basin). New planning initiatives are being implemented on the Black, Seine, and Boyne rivers as well as a number of selected tributaries on the west side of Lake Manitoba (the Narrows area).

Staff continue to participate in Manitoba Envirothon by preparing test questions and assisting in the field day and oral components. Envirothon is an annual Olympic-style academic and environmental program. High school students (Grade 9-12) are tested in four discipline areas (aquatics, forestry, soils, and wildlife) and an annual theme (this year: Agriculture Land Conservation and Preservation). This year the competition is being held at Swan River; 21 Manitoba school teams have entered. The winning team from Manitoba will represent their province at the National Canon Envirothon in Maryland.

Table FI.4
12.4(f)3 Fisheries Habitat Management

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	451.8	8.00	448.1	3.7	
Total Other Expenditures	51.5		51.5	0.0	

Sport and Commercial Fishing Management

The Section develops, administers, and evaluates management programs and policies for sport, commercial, and domestic use, including commercial bait-fishing and trout farming. It also manages Northern Fishermen's Freight Assistance Program, distribution and reconciliation of commercial fishing licences, and fish production information.

The Fish Transportation Loadslip Regulation was amended to improve information collection and monitoring of Manitoba's valuable fisheries resources. This has become increasingly difficult in view of recent increases in illegal sales occurring from unlicenced fishing. The amendment requires the completion of a loadslip for all fish transported by any person other than the licenced commercial fisherman who has declared where he will be delivering his fish on his commercial fishing licence (including fish delivered to a packing station).

Manitoba Conservation is working with First Nations and other stakeholders to develop fisheries management approaches that accommodate constitutional obligations and other stakeholder interests. Staff assisted regional staff working with stakeholders in Dauphin Lake fishery, to negotiate an agreement and co-management plan governing harvest of walleye, and continued to develop a management approach with Regional staff and Sagkeeng First Nation for Winnipeg River fisheries issues.

Director's Authorizations, which allow small retailers to sell fish for commercial fishermen, were processed for 32 fishermen consigning fish to four retailers. Sales under Authorizations totalled 14,920 kgs (32,893 lbs.), of which 60% was pickerel.

Lake Winnipegosis

Assessment continued on broadening representation on the Advisory Board to include the full range of fishery interests, including commercial fishing, Aboriginal, and tourism. The Department is working toward establishing a broad stakeholder management board to advise on the management of Lake Winnipegosis, with the objective of rehabilitating the walleye population. During open-water and winter fisheries, pickerel production was 74,980 kg (165,300 lbs.), 55% below last year.

Lake Winnipeg

A sub-committee recommended by the Lake Winnipeg Commercial Fisheries Management Advisory Board was established to assist in the development of a long term strategy for the commercial fishery. The plan is to focus on commercial fishing issues and to provide management direction for the Lake Winnipeg commercial fisheries for the next three to five years. The sub-committee has held four meetings in 2002/2003 and has identified a number of needs/issues, opportunities and a vision statement. During open-water and winter fisheries, pickerel production (3.2 million kg) continues to be high in part due to strong year classes that are taking advantage of smelt as a food source and demonstrating high growth rates. Whitefish production dropped slightly (1.6 million kg) with greater abundance in the channel area causing fishermen to lobby for additional "station quota " so they do not have to fill their quota with lower valued whitefish. Sauger production (740,411 kg) increased by 12%.

Lake Manitoba

A limited winter perch fishery using three-inch mesh nets with controls in place to minimize impact on pickerel and sauger was continued in the south basin of Lake Manitoba. Pickerel production (243,447 kg) in winter was 7% below last year, while sauger production (21,727 kg) increased by 41%, and perch production (304,592 kg) decreased by 31%.

Other Programs

Chemawawin Cree Nation (CCN) voluntarily ceased fishing Cedar Lake in 1997 to regenerate the fishery in time to restart in 2003. Their objective is to reduce the number of fishers to 40 from 81. CCN has the support of Easterville Council and fishers in their efforts to resolve fishery questions. Fisheries Branch continues to work with the new Cedar Lake commercial fishermen's organization on development of a Fisheries Management Plan.

There were 32 licensed fish-farmers and about 750 hobby farmers in private waters. Four major operators (two fingerling producers and two brokers/importers) distribute fingerlings to hobby farmers each spring. Six fee-for-fishing businesses, where customers pay to fish in privately-stocked ponds or Crown waters, generally provide easy access to fishing from shore, and are ideal for small children and individuals otherwise unable to angle. Fish farmers reported selling 190,000 rainbow trout fingerlings. Grow-out operations sold16,050 kgs of rainbow trout and 47,000 kgs of arctic char.

Seventy-eight commercial baitfish fishers were licensed, producing and selling about 86,000 kgs of frozen baitfish. Forty-one live baitfish fishers produced about 107,000 dozen baitfish. Gross sales were about $657,400. Twenty-nine leech harvesting licences were issued, with about 1,700 kgs produced, valued at about $77,540. Sixty live bait dealer licenses were issued, allowing retail sale of live baitfish and leeches.

Fisheries Branch continues to co-ordinate the Urban Angling Partnership (UAP), comprising Manitoba, Winnipeg, Manitoba Wildlife Federation, Fish Futures, Mid-Canada Marine Dealers Association, and Don Lamont of *The Complete Angler*, that promotes angling in the city, especially the excellent opportunities on Red and Assiniboine Rivers. UAP activities included:

- *Learn to Fish Clinics*, offered through Winnipeg Community Services Department Leisure Program, aimed at families, new anglers, and those who have not fished for some time. Tackle dealers provide bait, tackle, and instruction, while manufacturers provide equipment. Fish and game clubs provide volunteer assistance.
- *Winnipeg Fish Festival*: a one-day event at The Forks, showcases the recreational angling community and promotes angling in the city as an affordable leisure activity. An estimated 5,000+ visitors attended fish-filleting demonstrations, kids' fishing educational stations, fishing displays, arts and crafts, on-stage seminars, and casting competitions.
- *Fish Winnipeg Media/Corporate Challenge*: a one-day event exposing media and corporate communities to this world-class recreational fishery. The event introduces Winnipegers to this fishery, showcases the angling community, promotes angling as a healthy, self-esteem-building outdoor leisure activity for youth, and raises funds to benefit Winnipeg youth/youth-at-risk angling programs. Over $10,000 was raised that was targeted at inner city youth-at-risk, and about 600 children enjoyed an angling experience. Plans for 2003 include expansion of the event and additional kids' fishing camps.
- *Angling access development*: improving access enhances popularity of urban angling. UAP members developed fishing platforms to complement existing public docks, and increased riverbank access along Red River. Work will continue on development and enhancement of access sites along Winnipeg river and stream corridors.
- *Urban Fishing Derby:* New for 2002, the derby is a one day event held at the Forks that promotes recreational angling. The derby provides an opportunity for families to participate in a program that promotes angling in the fall season.

- *Catfish Hunter Initiative*: working in co-operation with Winnipeg Goldeyes Baseball Club, UAP assisted development and implementation of the Winnipeg Goldeyes Catfish Hunter Contest. The contest promotes angling and profiles the world-class fishery on Red and Assiniboine rivers.

The 2003 *Anglers' Guide* was published under a new contract with Fish Futures. The change to a larger format allowed for a simpler presentation of angling regulations and a saving of sufficient space to allow the inclusion of pictures of the more popular species that are sought after in Manitoba. The guide summarizes angling regulations, highlights new and proposed regulations, and includes management and other information. Anglers and user groups continued to play an important role in developing regulations and attention continues to be focused on simplifying regulations without diminishing conservation.

Final results of the *2000 Survey of Recreational Fishing* are now available for Manitoba and other Canadian jurisdictions. Compared to the 1995 results, Manitoba was the only province to show any significant increase in catch rates, participation, angling effort and expenditures directly related to fishing. Manitoba also continued to show its strong leadership in conservation with over 75% of the catch released.

While Manitoba seniors still require an angling license, alterations to angling fees resulted in Manitoba seniors now being able to obtain a Seniors Conservation License at no cost. Those seniors wanting a regular limit of fish must still purchase a Resident Regular Angling License.

Table FI.5

12.4(f)4 Sport and Commercial Fishing Management

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	619.9	12.00	630.7	(10.8)	
Total Other Expenditures	58.2		59.2	(1.0)	

Table FI.6

Angling Licence Sales and Revenue 1992-93 to 2001-02

Year		Resident/Manitoba – Sr. Conservation			Total: Resident of Manitoba	
		Number	Fee $	Revenue $	Number	Revenue $
1997-98		7,878	5.61	36,615.58	7,878	36,615.58
1998-99		8,700	5.61	40,315.00	8,700	40,315.00
1999-00		8,935	5.61	41,411.35	8,935	41,411.35
2000-01		8,532	5.61	39,537.52	8,532	39,537.52
2001-02		8,621	5.61	39,940.81	8,621	39,940.81

Year	Resident of Canada-Regular			Resident of Canada-Conservation			Total: Resident of Canada	
	Number	Fee $	Revenue $	Number	Fee $	Revenue $	Number	Revenue $
1992-93	64,496	10.00	613,343.50	77,358	5.00	348,538.50	141,854	961,882.00
1993-94	58,833	12.50	706,624.50	73,227	7.50	512,963.00	132,060	1,219,587.50
1994-95	57,783	12.50	694,044.00	77,716	7.50	544,498.00	135,499	1,238,542.00
1995-96	55,235	12.50	663,355.00	76,844	7.50	538,289.00	132,079	1,201,644.00
1996-97	52,158	12.50	626,742.00	75,081	7.50	526,422.50	127,239	1,153,164.50
1997-98	51,859	14.02	676,760.18	73,603	8.41	546,849.23	125,462	1,223,609.41
1998-99	57,381	14.02	748,238.62	84,000	8.41	623,386.00	141,381	1,371,624.62
1999-00	57,567	14.02	750,690.37	84,938	8.41	630,356.58	142,505	1,381,046.92
2000-01	56,092	14.02	731,276.84	85,256	8.41	632,700.96	141,348	1,363,977.80
2001-02	56,951	14.02	742,473.02	86,223	8.41	639,893.43	143,174	1,382,366.45

Year	Non-Resident of Canada – Regular			Non-Resident of Canada- Conservation			Total: Non-Resident of Canada	
	Number	Fee $	Revenue $	Number	Fee $	Revenue $	Number	Revenue $
1992-93	9,316	30.00	274,922.50	19,868	15.00	288,316.00	29,184	563,238.50
1993-94	8,770	32.50	280,744.00	20,742	17.50	352,905.50	29,512	633,649.50
1994-95	8,299	32.50	265,668.50	21,906	17.50	372,702.50	30,205	638,371.00
1995-96	7,821	32.50	250,369.50	22,448	17.50	381,856.00	30,269	632,225.50
1996-97	6,840	32.50	218,945.50	21,757	17.50	370,199.50	28,597	589,145.00
1997-98	6,712	37.38	244,557.56	23,406	20.56	458,473.36	30,118	703,030.92
1998-99	7,149	37.38	260,237.62	26,223	20.56	513,312.88	33,372	773,550.50
1999-00	7,192	37.38	261,840.96	27,151	20.56	531,532.56	34,343	793,373.52
2000-01	6,130	37.38	223,166.40	29,959	20.56	586,452.04	36,089	809,618.44
2001-02	6,120	37.38	222,778.60	27,716	20.56	542,490.96	33,836	765,269.56

Year	Total Regular Licences			Total Conservation Licences			Total Licences	
	Number		Revenue $	Number		Revenue $	Number	Revenue $
1992-93	73,812		888,266.00	97,226		636,854.50	171,038	1,525,120.50
1993-94	67,603		987,368.50	93,969		865,868.50	161,572	1,853,237.00
1994-95	66,082		959,712.50	99,622		917,200.50	165,704	1,876,913.00
1995-96	63,056		913,724.50	99,292		920,145.00	162,348	1,833,869.50
1996-97	58,998		845,687.50	96,838		896,622.00	155,836	1,742,309.50
1997-98	58,571		921,317.74	104,887		1,041,938.17	163,458	1,963,255.91
1998-99	64,530		1,008,476.24	118,923		1,177,013.88	183,453	2,185,490.12
1999-00	64,759		1,012,531.30	121,024		1,203,300.49	185,783	2,215,831.79
2000-01	62,222		954,443.24	123,747		1,258,690.52	185,969	2,213,133.76
2001-02	63,071		965,251.62	122,560		1,222,325.20	185,631	2,187,576.82

Notes:
1. Revenue figures are net (less vendor's commission).
2. Manitoba Fisheries Enhancement Stamp initiated in 1993-94.
3. Resident of Manitoba Senior's Conservation Licenses were introduced in 1997-98.
4. Starting with the 1999-2000 season – angling licenses will be valid from May 1 – April 30. License sales statistics for the 2002-03 Annual Report will be based the most recent complete season i.e. the 2001-02 season.

Table FI.7

Fishermen Employed in Manitoba Commercial Fishery, 2001-2002

	Northern Lakes	Lake Winnipeg	Lake Manitoba	Lake Wpgosis.	Other Lakes	Overall
Summer						
Licence Holders	455	852	99	55	29	1432
Hired Men or Helpers	202	170	130	84	27	603
TOTAL	657	1022	229	139	56	2035
Winter						
Licence Holders	139	178	471	168	219	1135
Hired Men or Helpers	162	33	342	118	164	806
TOTAL	301	211	813	286	383	1941
Annual						
Licence Holders	469	895	491	171	223	2156
Hired Men or Helpers	210	178	368	160	170	1073
TOTAL	679	1073	859	331	393	3229

Note: Those who fish in more than one area or season, or who fish both as hired men and licence holders, are counted only once in the appropriate Total column. Where hired-man-and-licence-holder duplication occurs, the individual is counted as a licence holder. Therefore, the table does not total horizontally or vertically.

Table FI.8

Commercial Fishing Production (round kg), Total Value, and Employment (Licensed Fishermen plus Hired Men) 1992-93 to 2001-02

	Northern Lakes		Lake Winnipeg		Lake Manitoba	
Year	**Weight (kg)**	**$ Value**	**Weight (kg)**	**$ Value**	**Weight (kg)**	**$ Value**
1992-93	2,625,750	4,097,600	4,644,650	11,291,300	1,099,950	2,988,500
1993-94	1,867,550	2,369,100	4,217,700	7,954,350	710,350	1,580,400
1994-95	2,572,500	3,887,600	4,655,500	11,174,800	821,000	2,747,250
1995-96	3,081,050	5,033,450	4,836,400	12,177,900	2,027,500	3,462,250
1996-97	3,339,650	4,290,500	4,312,600	8,864,050	1,344,450	1,840,450
1997-98	2,621,550	3,565,750	3,991,600	8,340,050	1,518,000	2,207,800
1998-99	2,761,800	4,350,500	4,825,600	14,119,350	1,734,450	2,284,800
1999-00	3,235,650	5,087,500	5,419,050	16,983,500	1,943,950	2,416,950
2000-01	3,318,650	5,608,800	6,217,850	20,386,750	2,342,400	2,847,050
2001-02	3,188,100	5,341,850	6,237,950	20,380,350	2,115,750	3,797,100

	Lake Winnipegosis		Other Lakes		Manitoba Total		
Year	**Weight (kg)**	**$ Value**	**Weight (kg)**	**$ Value**	**Weight (kg)**	**$ Value**	**Total Employment**
1992-93	879,700	696,400	813,750	1,405,600	10,063,800	20,479,400	3,354
1993-94	1,074,350	477,000	1,034,150	1,586,050	8,904,100	13,966,900	3,173
1994-95	775,350	436,400	989,000	1,911,550	9,813,350	20,157,600	3,125
1995-96	1,385,000	659,750	1,195,300	1,555,900	12,525,250	22,889,250	3,345
1996-97	1,635,650	682,500	1,190,800	1,089,350	11,823,150	16,766,850	3,325
1997-98	1,465,050	842,800	915,700	725,050	10,511,900	15,681,450	3,237
1998-99	2,106,550	1,892,650	775,000	1,273,000	12,203,400	23,920,300	2,990
1999-00	2,719,850	2,266,250	778,550	951,850	14,097,050	27,706,050	3,216
2000-01	2,753,550	2,004,200	892,250	1,131,450	15,524,700	31,978,250	3,224
2001-02	2,577,000	1,846,600	702,400	917,200	14,821,200	32,283,100	3,229

NOTE: *Total value includes both Initial Value and Final Payment.*

Table FI.9

Commercial Fishing Production (Round Weights kg) by Area and Total Value By Species, 2001-2002

Species	Northern Lakes		Lake Winnipeg		Lake Manitoba		Lake Winnipegosis	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Bass			30,150	4,400				
Carp	50	50	146,100	65,350	133,600	72,600	48,250	70,950
Goldeye	3,150	500	1,250	450		Trace[2]	Trace[2]	350
Maria		2,100		2,150		50		150
Mullet	512,050	139,900	199,050	30,800	513,450	592,450	1,066,900	845,150
Perch	1,200	1,800	40,900	20,150		445,150	Trace[2]	27,800
Pickerel	676,350	65,550	3,058,700	249,650		262,300	94,950	74,050
Pike	651,000	258,300	113,800	16,550		71,750	31,000	236,900
Sauger	10,400	1,000	451,000	205,350		14,650	Trace[2]	Trace[2]
Trout	39,250	Trace[2]						
Tullibee	87,500	13,550	350	150				Trace[2]
Whitefish	638,500	85,900	1,150,700	450,950		9,750	30,500	50,050
Total	2,619,450	568,650	5,192,000	1,045,950	647,050	1,468,700	1,271,600	1,305,400

	Other Lakes[1]		Total Production			Total Value $[3]		
Species	Summer	Winter	Summer	Winter	Total	Summer	Winter	Total
Bass			30,150	4,400	34,550	14,200	2,900	17,100
Carp	29,100	62,400	357,100	271,350	628,450	147,500	138,100	285,600
Goldeye		150	4,400	1,450	5,850	12,450	4,250	16,700
Maria				4,450	4,450		1,200	1,200
Mullet	37,050	194,250	2,328,500	1,802,550	4,131,050	637,900	509,400	1,147,300
Perch	2,150	23,200	44,250	518,100	562,350	217,700	2,549,050	2,766,750
Pickerel	2,750	100,000	3,832,750	751,550	4,584,300	17,305,500	3,217,700	20,523,200
Pike	8,850	157,250	804,650	740,750	1,545,400	608,900	574,450	1,183,350
Sauger		350	461,400	221,350	682,750	1,994,950	966,700	2,961,650
Trout			39,250	Trace[2]	39,250	33,400	Trace[2]	33,400
Tullibee		1,700	87,850	15,400	103,250	66,550	11,150	77,700
Whitefish	39,850	43,350	1,859,550	640,000	2,499,550	2,315,450	953,700	3,269,150
Total	119,750	582,650	9,849,850	4,971,350	14,821,200	23,354,500	8,928,600	32,283,100

[1] Includes Buffalo, Chitek, Crab, Cross Bay, Dauphin, Goose (St. Martin), Inland, Leaf, Little Limestone, Little Strong, Mire-Proulx, Pelican, Pine (St. Martin), Red Deer, Reedy, St. Martin, Strong, Sumpton, Swan, Tan, Waterhen, William.

[2] Small amount.

[3] Total $ value includes both initial value and final payment.

NOTE: Commercial fishing statistics for 2002-2003 fiscal year were not available in time to be included in this report. They will appear in the annual report for the next fiscal year.

Northern Fishermen's Freight Assistance

The Northern Fishermen's Freight Assistance (NFFA) program assists marginal commercial operations by partial subsidization of transporting certain species to Winnipeg. Fishers pay the first 20¢/kg of freight, the Province pays the next 45¢/kg, and fishers pay any costs over 65¢/kg. Eligible species are whitefish, pike, lake trout, perch, goldeye, tullibee and sucker. Subsidy payments to fishers are issued weekly by Freshwater Fish Marketing Corporation (FFMC) on behalf of Manitoba. Fisheries allowed to opt out of FFMC are paid by the Branch at season end.

To ensure expenditure does not exceed the $410,000 cap set in 2000, fishers receive an initial payment, usually 70% of their estimated eligibility. They receive final payment at fishing-year end. While a full 30% final payment may not be possible when production is high, a final payment higher than 30% may occur in low-production years. NFFA paid about $186,000 to 364 fishers for 2002 summer season. Payments to about 100 fishers for winter season will likely be about $45,000.

Table FI.10

12.4(f)5 Northern Fishermen's Freight Assistance

Expenditures by Sub-appropriation	Actual 2002/03		Estimate 2002/03	Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Other Expenditures	410.0		410.0	0.0	

Fisheries Enhancement Initiative

In its 10th year, the FEI has funded 240 projects directed at enhancing fish populations and their habitat as well as funding educational opportunities. Over the years a number of projects involved watershed inventory studies and this year was no exception with studies initiated for Seine River, Sandy Lake and the tributaries entering the west side of Lake Manitoba from the Narrows north.

Many project submissions result once the inventories are completed and a list prioritizing sites is compiled. Ongoing stream bank restoration through fencing, off shore waterers, controlled crossings and revegetation work on Stoney Creek and Brookdale Drain, are examples of this. In some areas, site specific restoration was done to demonstrate the effectiveness of soil bioengineering techniques and the importance of riparian areas to aquatic ecosystems (Birdtail and Boyne Rivers).

This year, educational opportunities existed through:

- assisting with the development of an aquatic field station at Fort Whyte Centre
- providing dollars for fisheries educational programming at the North American Wildlife Enforcement Memorial Museum at the International Peace Gardens and the Sandilands Forest Centre at Hadashville and
- assisting with the printing of *The Freshwater Fishes of Manitoba* publication.

Projects physically improving fish habitat included:

- enhancing walleye spawning in Little Black River,
- improving fish passage on Archie Creek, a tributary to Lake Winnipegosis, and
- installing aqua cribs to provide black crappie habitat in Lake Minnewasta.

The Branch partnered with the Manitoba Arts Network to celebrate and promote the Fisheries Enhancement Initiative fund and annual stamp competition. An exhibit of the original winning pieces from 1993 – 2003, as well as the top 10 submitted artwork to the 2003 competition, was produced and will tour throughout Manitoba.

Table FI.11

12.4(f)6 Fisheries Enhancement Initiative

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Other Expenditures					
Grants/Transfer Payments	349.6		350.0	(0.4)	
Total Other Expenditures	349.6		350.0	(0.4)	

Wildlife and Ecosystem Protection

The Branch manages wildlife resources to conserve species and ecosystems, based on the preservation of biological diversity and on the principles of sustainable development. The Branch protects and enhances habitat on Crown and private lands. Resources are allocated to maximise long-term social, economic, and environmental benefits. The Branch co-operates with a wide range of clients and groups to promote commitment to conservation and to realise optimum benefits from interaction with wildlife. The Branch represents wildlife interests in departmental, provincial, national, and international initiatives for migratory wildlife, game and fur species, problem wildlife, protected spaces, conservation, sustainable development, biodiversity, federal-provincial harmonisation, and species at risk. The Branch ensures that wildlife programs reflect the cultural, subsistence, social, and economic values of Manitobans, consistent with policy, procedure and legislation.

Administration

The Section provides legislation, policy, and procedure support to direct and co-ordinate programs and to ensure effective performance. The Section also co-ordinates spending estimates, ensuring expenditures are within budget, and provides payroll, financial, and operational support, and administration of wildlife permits required under federal and provincial statutes.

The half-time Legislative Assistant position in the Legislation and Permits Unit was refilled by secondment through the competition process. This position is part of the succession planning initiative to ensure there is minimal disruption of service when senior staff retires.

Grants were made to: Churchill Northern Studies Centre (research on wildlife and resource management); Manitoba Trappers Association (trapper education and involvement in fur management); Fur Institute of Canada (humane trap development and public information); Manitoba Habitat Heritage Corporation (North American Waterfowl Management Plan and Critical Wildlife Habitat Program), and Oak Hammock Marsh Interpretive Centre.

The Director represents provincial interests on various local, national and international wildlife initiatives: International Association of Fish and Wildlife Agencies, Canadian Wildlife Directors Committee, Arctic Goose Joint Venture, Canadian Polar Bear Advisory Committee, Canadian Co-operative Wildlife Health Centre, Mississippi Flyway Council, Manitoba Habitat Heritage Corporation, Oak Hammock Marsh Interpretive Centre, and Prairie Habitat Joint Venture.

The Wildlife Aboriginal Liaison Manager position continues to be seconded to the Aboriginal Relations Branch.

Wildlife Branch Website

The Website, at http://www.gov.mb.ca/natres/wildlife/index.html, continues to be expanded and enhanced. It provides an overview of who we are, what we do, and how to reach us, as well as information on current issues.

General Extension

In addition to extension associated with each project, program displays were staffed at Delta Marsh Birding Festival, Manitoba Grazing School, Association of Manitoba Municipalities Annual Convention, Manitoba Conservation Districts Annual Meeting, Canadian Waterfowl Festival, Home Expressions and Royal Manitoba Winter Fair. Presentations and field tours were given to groups.

National Wildlife Week

National Wildlife Week (April 7-13, 2002) was co-ordinated with the Canadian Wildlife Federation (CWF). The theme selected for 2002 was "Climate is Changing – Help Wildlife Weather the Storm."

Teacher kits were purchased from CWF and were distributed to all elementary schools in Manitoba.

Legislation

The Polar Bear Protection Act was proclaimed. This Act gives the force of law to the 1998 policy and procedure directives respecting the disposition of live polar bears and highlights the seriousness that Manitoba places on such matters. The *Polar Bear Protection Regulation,* governing matters such as when a bear can be placed in captivity, application procedures, permit eligibility, facility standards and inspections, and record keeping, came into force at the same time the Act was proclaimed.

Four ministerial regulations under ***The Wildlife Act*** were amended and another was rewritten to reflect changes required for hunting and trapping seasons. Other ministerial regulation amendments included restrictions on baiting and feeding members of the Deer Family to prevent the spread of diseases communicable to wildlife and domestic animals such as bovine tuberculosis. The *Wildlife Protection Regulation* was developed to regulate the transport of live wildlife or wildlife carcasses in or through Manitoba due to concern over the risk of disease transmission such as chronic wasting disease.

One Order-in-Council regulation under ***The Wildlife Act*** respecting amendments to a number of wildlife lands was completed.

Wildlife Permits

The Branch administers permits and licences required under ***The Wildlife Act*** and ***The Endangered Species Act***. Subject to federal guidelines, CITES (Convention on International Trade in Endangered Species of Wild Flora and Fauna) Export Permits required under the ***Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act*** are also issued. All permit form templates had further revisions to reflect administrative changes or to meet auditing standards. In addition, application forms were developed where an immediate necessity was indicated.

Further review of the Disabled Hunter Permit program was undertaken on request of stakeholders to consider expanding the program. The proposed changes would include expansion to include discharge of firearm permit holders to also include game bird hunting and modification of permit conditions respecting accompaniment by another hunter to address compliance with game retrieval and consequences in the case of equipment breakdown.

Table WI.1

Wildlife Permits Issued, 2002

Provincial Permits	
Dead Wild Animal Possession Permit (educational)	14
Dead Wild Animal Possession Permit (personal)	105
Applications Denied (dead wild animal)	11
Disabled Hunter Permit (permanent)	121
Disabled Hunter Permit (discharge firearm)	5
Disabled Hunter Permit (revoked)	1
Applications Denied (disabled hunter)	47
Dog Trainer's License (non-resident)	2
Dog Training Club License	2
Exotic Animal Import Permit	0
Field Trial Permit	2
Live Exotic Animal Possession Permit	1
Live Wild Animal Possession Permit	8
Power Boat in Marsh Permit	2
Serve Meat of Wild Animal Permit	4
Species At Risk Permit	5
Use Vehicle Off Designated Route Permit	1
Wild Animal Capture Permit	4
Wild Animal Export Permit	581
Wild Animal Import Permit	17
Wild Animal Kill Permit	2
Wild Animal Part Dealer Permit	27
Wildlife Scientific Permit	21
Applications Denied (all others)	2
Total (Provincial Permits):	**925**
Federal Permits	
CITES Export Permit	1237
Total (Federal Permits):	**1237**

Table WI.2
12.4(g)1 Administration

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	480.0	9.50	464.3	15.7	
Other Expenditures	367.8		370.4	(2.6)	
Grant Assistance	207.0		207.0	0.0	
Total Other Expenditures	574.8		577.4	(2.6)	

Game and Fur Management

Hunting Opportunities

Core programs like hunting continue to be an important focus for Manitoba Conservation. Providing greater access to hunting opportunities, simplifying hunting regulations, and providing additional opportunities for young hunters are important objectives. Hunting provides many positive benefits - camaraderie, nature appreciation, and for many, an important source of food. In some cases, hunting can be used as an effective tool for managing wildlife.

In 2002-03, the length of the shotgun/muzzleloader season in Game Hunting Area (GHA) 33 was increased to provide additional hunting opportunities and to help mitigate deer damage complaints by increasing the number of deer taken. Increasing licence quotas and offering an additional tag to elk hunters in GHAs 23 and 23A in the Riding Mountain area will help reduce the population to the goal of 2,500 animals. This is part of the Department's commitment to the co-operative Bovine TB Management Program.

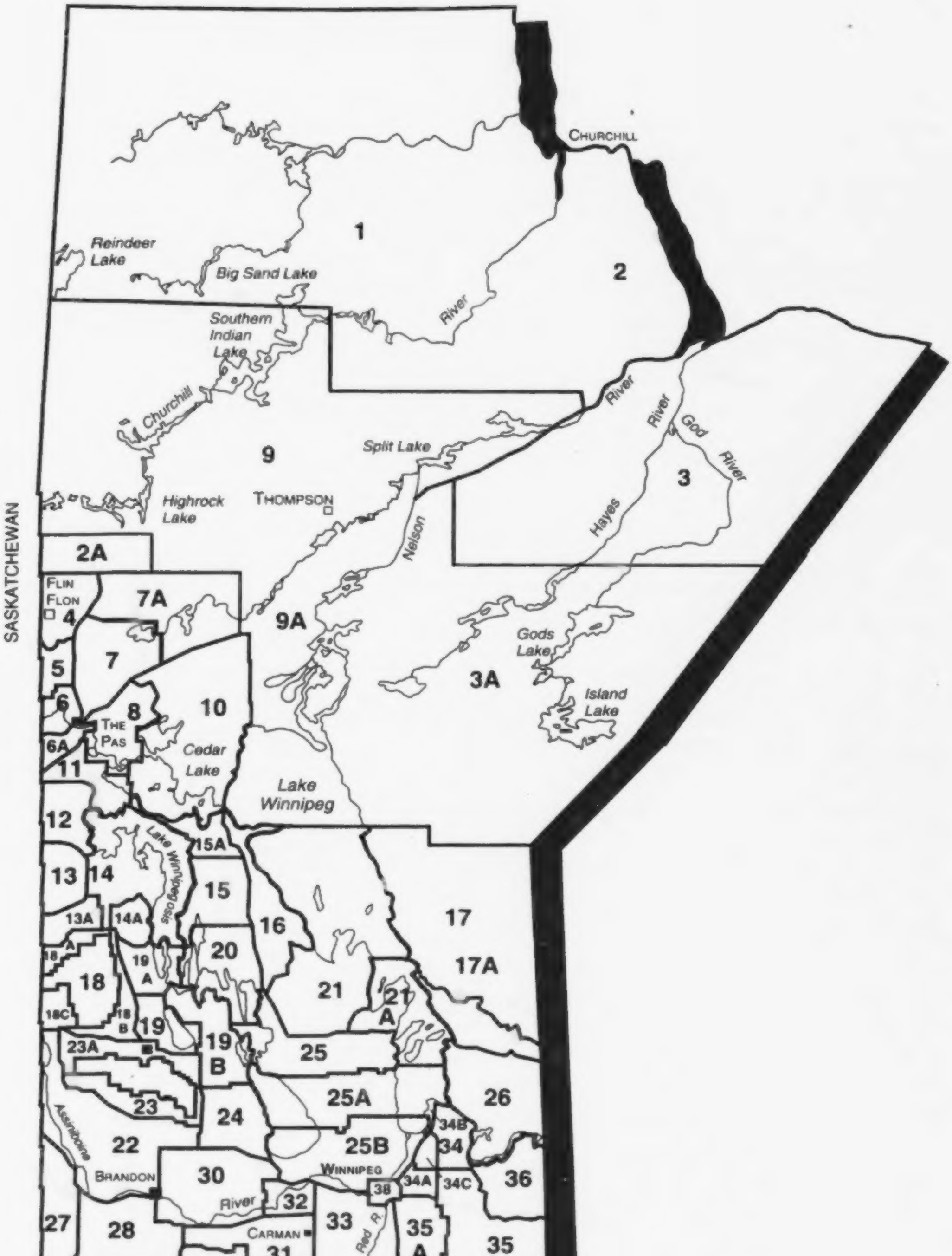
The expansion of Sunday hunting for upland game birds, wild turkey, and waterfowl was well received in 2001. Consultation undertaken in 2002 indicated support for expanding Sunday hunting for big game in 2003-04. New archery, landowner and rifle elk seasons were introduced in the Interlake, more opportunity for elk hunters was provided in the Spruce Woods and Duck Mountain areas, vehicle restrictions were relaxed in GHA 7 and the special spring snow goose season was extended to the end of May.

The success of youth-mentoring programs such as Waterfowler Heritage Days continues, thanks to the support of many groups and individuals including Manitoba Wildlife Federation, Delta Waterfowl Foundation, Manitoba Lodges and Outfitters Association, and Netley Marsh Waterfowl Foundation. Sales of the Youth Hunting Licence Package are consistent with some 3,400 packages purchased annually since its introduction. The Department intends to expand these programs in 2003-04 to provide additional opportunity, quality education and practical experience to youth interested in hunting.

Waterfowl Management

Given the growing pressures being placed on wildlife and wildlife habitat today, development and delivery of provincial wildlife management programs is crucial. Management of Manitoba's waterfowl and wetland resources has been accomplished through direct delivery of Wildlife Branch programs as well as partnerships involving non-government wildlife organisations, municipalities, conservation groups, provincial and federal government departments, and interested individuals. Programs were directed at disease outbreaks, habitat improvement, conservation easements, population monitoring, determination of harvest, research, and youth hunter education. Manitoba continues to influence local and regional waterfowl management through participation and input into national and international working groups such as the Mississippi Flyway Council and the Arctic Goose Joint Venture. New initiatives were developed to address concerns about declining waterfowl hunter numbers and increasing urban goose populations.

Figure 6.
Game Hunting Areas



Churchill
1
2
Reindeer Lake
Big Sand Lake
River
Southern Indian Lake
Churchill
9
Split Lake
River
River
Gods
River
3
Highrock Lake
Thompson
Nelson
Hayes
SASKATCHEWAN
2A
Flin Flon
4
7A
9A
Gods Lake
5
7
3A
Island Lake
6
8
10
The Pas
6A
Cedar Lake
11
Lake Winnipeg
12
15A
Lake Winnipegosis
13
14
15
17
13A
14A
16
18A
19A
20
17A
18
21
21A
18C
18B
19
19B
25
23A
25A
26
23
24
Assiniboine
22
25B
34B
34
Brandon
30
Winnipeg
38
34A
34C
36
River
32
27
28
33
Red R.
35A
35
Carman
31
29A
29
31A
Winkler

Upland Game Bird Management

Population trends for most upland game birds in Manitoba indicate that where habitat has been maintained, numbers of birds remain relatively stable. Spring weather conditions during nesting and rearing periods has a decisive influence on population status. Generally, weather conditions have been favourable, with a mild winter and early spring followed by warm summer. Precipitation was variable and forage production was very good in most areas. Maintenance of provincial Wildlife Management Areas has been beneficial to upland populations. However, expansion of agriculture and industry has been detrimental to upland populations in some areas.

Wild turkey populations continue to prosper in southern Manitoba with numbers now exceeding 5,000 birds. Interest in turkeys and turkey hunting has expanded. Hunting opportunity was expanded through longer seasons and sales of hunting licences increased. The Department continued to work closely with Wild Gobblers Unlimited and individuals to remove and relocate problem turkeys from urban areas and rural communities.

White-Tailed Deer

Normal winter conditions occurred through most of Manitoba and the population experienced average winter mortality. Deer densities are moderate to high across much of the south. The Eastern Region herd has recovered from high winter mortality in 1995-96 and 1996-97. This recovery is due to five successive years with low winter mortality, and four years with buck-only bag limits. The buck-only season in southeast was cancelled, reverting to an any-deer limit in 2001-02. High numbers inside the Red River Valley, where hunting is limited or prohibited, continue to substantially damage speciality crops and landscape plantings. A Second Deer Licence was again available in south and northeast of Winnipeg.

Rifle season licence sales to residents were 31,026 (32,283 in 2001-02). Resident bow hunting licence sales continued as previously at 3,014 (3,073 in 2001-02). Resident muzzleloader licence sales increased to 8,243 (7,801 in 2001-02). Second deer licence sales to residents were 549.

Non-resident/non-Canadian muzzleloader Licence sales decreased slightly, to 150, and archery, to 300. Sales increased slightly for non-resident/non-Canadian rifle, to 1,156.

Black Bear

Populations are stable or growing, indicating that current hunting intensity (3,248 hunters) is sustainable. About 1,264 residents hunted bear, similar to 2000-01 (1,251), but considerably below the long-term average. Non-resident harvest is managed by quota allocations to outfitters. Non-resident hunter numbers were down slightly to 1,959. Quality experiences, a 75 percent success rate, and a reputation for big bears with a range of colour phases, attract non-residents.

Direct measurement of populations is difficult. Consequently, indirect methods are used to detect changes in densities, such as field observations by staff, hunters and outfitters, hunter success rates, and sex ratio and age distribution of harvest. A computer model, using hunter harvest data and biological samples from hunters and outfitters, was used to evaluate harvest levels to ensure sustainability. Female reproductive tracts show number of foetal attachment(s), and premolar teeth provide age, together indicating age at onset, and frequency, of lactation.

Concern about orphaned cubs prompted a complete assessment of spring hunting. A mathematical model was developed to estimate number of cubs orphaned as a result of spring hunting season. Findings indicate there is a very low incidence of cub orphaning due to hunting.

Moose

Moose populations generally declined in Turtle Mountain, Duck Mountain, and Riding Mountain, primarily because of winter tick infestations. Moose populations in other areas of the province have remained fairly stable, although below carrying capacity. Discussion of long-term harvest strategies with First Nations continued.

5,257 resident and 167 non-resident licences were sold, similar to 2001-02.

Elk

Province-wide, numbers decreased slightly. Duck Mountain and Porcupine Hills herds remain below target because of increased hunting that slowed recovery from the elk capture program in late 1990's. The Spruce Woods population remains at about 650. The South Interlake herd, which was higher than its population goal of 1,000, is believed to have declined to below 1,000 because of increased hunting opportunities. The Riding Mountain area population has declined from about 4,000 to between 3,000 and 3,500 animals. Hunting seasons and licence quotas were used to help address Bovine Tuberculosis (TB) concerns in the Riding Mountain area. The objective of the current level of hunting is to reduce the elk population to 2,500 animals as one means of reducing disease transmission and prevalence.

4,864 elk licences were sold for rifle, archery, and landowner seasons.

Caribou

Populations of barren-ground caribou are stable or increasing, while coastal herds (Cape Churchill and Penn Island ranges) are stable. There were 735 resident and 186 non-resident licences sold. The non-resident season in GHA 1 benefits communities and lodges in the north, where employment opportunities are limited. Guiding, outfitting, and accommodations are primary income-generating services with spin-offs to other sectors.

Diseases in Wildlife

There is evidence of low-level presence of tuberculosis in Riding Mountain area, detected in cattle and elk. This has implications for agriculture, wildlife management, and human health. All involved agencies are co-operating to address the situation.

Monitoring tuberculosis in wild ungulates in this area completed a fifth year. Ten elk from the western portion of Riding Mountain region and one white-tailed deer harvested in Rossburn area have tested positive for the disease over that time period. Over 2,000 elk and deer samples have been examined. Bovine TB is an Old World disease that was brought to North America by infected cattle; infections in elk and deer were acquired from cattle. The Department, Manitoba Agriculture and Food, Canadian Food Inspection Agency, and Parks Canada, the main program partners, implemented the second year of a five-year Action Plan for Bovine TB Management in Manitoba which provides expanded surveillance, scientific studies to understand disease dynamics, disease containment, and eradication.

Chronic Wasting Disease (CWD) is a fatal neurological disease affecting the deer family (cervids), including elk, white-tailed deer and mule deer. This disease was found in captive deer and elk in Saskatchewan, Alberta and seven States, and in wild deer and elk in Saskatchewan and five States. The CWD surveillance program, initiated in 2001-02, is continuing. Approximately 650 hunter-harvested white-tailed deer samples near the Saskatchewan and American borders in southwestern Manitoba and 250 elk samples from Riding Mountain area were collected and tested. To date, CWD has not been detected in Manitoba's wild or captive cervids. Containment efforts in Saskatchewan and Alberta were monitored as infection in wild populations could spread to Manitoba. Several other initiatives were introduced to prevent the introduction of the disease into Manitoba. These initiatives include a ban on the possession and use of any substance that contains materials from cervids and restrictions on the importation of live and dead cervids from other jurisdictions.

Non-resident Hunting Licence Allocation Program

Non-resident deer, moose, bear, caribou, and game bird hunters spent over $1.5 million for licences and generated over $20 million in economic activity. Allocation of non-resident big game licences through lodges and outfitters allows harvest modulation to ensure sustainability while meeting residents' needs. The program is regularly reviewed and adjusted to ensure that objectives are met. The procedure for allocating non-resident hunting licences was changed to provide First Nations applicants additional opportunity to enter the industry. Development of policies and procedures for allocating non-resident caribou licences was completed, and will result in sustainable use of barren-ground caribou, and ensure that communities on the fall caribou range receive a proportionate share of benefits. The Manitoba Lodges and Outfitters Association, Manitoba Wildlife Federation, and individual outfitters were consulted to identify and address concerns. Major goals of the non-resident hunting program are to foster stewardship of wildlife resources and improve the business environment.

Big Game Monitoring

Understanding population dynamics is essential to management. Population changes are detected by comparing data collected in a similar manner over time. The most commonly used methods are:

- Winter aerial inventories to estimate abundance, sex and age composition, recruitment and distribution;
- Mail questionnaires to estimate harvest levels; and
- Biological specimen collection to assess age and reproductive status.

Aerial Surveys

Financial constraints reduced aerial surveys in 2002-2003 to one total count survey and one small survey to test assumptions. The surveys were:

- Turtle Mountain Ungulates: GHAs 29 and 29A (approximately 1,300 km^2) were surveyed for moose elk, and deer. A total count was performed, so there was no stratification or sampling. The counts were 243 moose, 87 elk and 1,962 deer. The moose population has apparently declined substantially because of a severe winter and a tick infestation in recent years. Previous surveys in 1997 and 1998 generated population estimates of 329 and 332, respectively. The deer count is down approximately 12 percent from 1998.
- Interlake Elk: This was not a survey in the usual sense. A small amount of money was available to test assumptions about a previous Interlake elk survey. In 2002, some areas were excluded from a total count of Interlake elk, because casual observations indicated that a total of less than 100 elk were resident in these areas. All but one of these were searched and only 54 elk were counted. We consider that this number verifies the 2002 assumptions.

Hunter Questionnaires, Big Game Seasons

In the annual cycle of the questionnaire program, the analysis of the questionnaires of the previous year occurs early in each fiscal year. In 2001-02, approximately 28,000 questionnaires had been mailed and approximately 14,000 responses received. The results are summarised below.

Table WI.3

Resident Hunter Big Game Harvest

Season	Licences Sold	Estimated Harvest
Deer rifle	31,687	21,411
Deer archery	3,041	1,095
Deer muzzleloader	7,753	4,880
Deer (antler-less) second	546	299
Moose rifle	3,389	714
Moose (conservation)	122	26
Moose (draw)	1,540	340
Moose archery	197	15
Moose (draw) archery	100	33
Elk (draw)	2,481	465
Elk (draw) archery	950	96
Elk (draw) landowner	631	177
Black Bear	1,255	384

The questionnaires for the 2002-03 year were mailed and will be analyzed for inclusion in 2003-04 reporting.

Biological Specimen Collection

The Section collects biological samples from hunters, who provide teeth and reproductive tracts from black bears. Crests are offered in appreciation for submission of teeth, and belt buckles for female reproductive tracts. These rewards contribute to a submission rate of 60% of (estimated) bear harvest. Analyses of 2001 specimens:

- 290 female and 734 male pre-molars were aged: average age for females was 6.47 years (oldest aged was 31.6 years in 1999) and for males, 5.1 years (oldest aged was 29.5 years in 1996).
- 248 complete reproductive tracts were examined, identifying 3.27 cubs as average litter for mature females (6+ years) and 2.0 cubs for 2-5 year-olds.

Problem Wildlife

This unit develops policies, legislation, and programs to address wildlife/human conflicts.

The Problem Beaver Control Program was expanded for the second consecutive year by adding the Winter Beaver Subsidy Program to the existing summer program. These Programs offered a subsidy of $15 per beaver taken from designated Municipalities and Registered Trapline Districts. The winter subsidy encourages harvest during the trapping season when the pelts have market value. A total of $125,835 was spent to remove 8,389 beavers ($48,585 to remove 3,239 beavers in summer and $77,250 to remove 5,150 beavers in winter). A total of 45 municipalities participated in the programs; however, most problems occurred in the municipalities around Duck Mountain and Riding Mountain National Park.

Wildlife Crop Damage Compensation Program, administered by Manitoba Crop Insurance Corporation (MCIC), reimburses producers for bear damage to beehives and produce, for deer, elk, and bear damage to crops and property, and for livestock loss or injuries from predators such as wolves. Compensation for big game damage increased this year due to below average temperatures during the latter part of winter. About $521,000 was paid for deer, elk and bear damage to standing crops and stored hay. Compensation for waterfowl damage also increased slightly to $484,000 due to poorer fall harvest conditions. Damage to leafcutter bee operations totalled $6,000 and damage to honey operations decreased from $122,000 to $60,000.

This was the fourth full year for the Predator/Livestock Damage Compensation Program. The number of predator claims increased from 897 to 1,100; compensation paid increased from $271,000 to $333,000.

Wolf problems were most significant in Western, Interlake and Eastern Regions. The coyote population increased, as did the number of claims. The number of predator claims filed with MCIC increased from 897 in 2001/02 to 1,100 in 2002/03. Manitoba Conservation announced that pesticides would no longer be used as a means of predator control. Instead, the Department signed a contract with the Manitoba Trappers Association to have Association members deal with predator problems experienced by livestock producers. The program is a pilot project that began in February 2003 and will be evaluated for future consideration during the next fiscal year.

At-large wild boar monitoring continued due to concerns for human safety, habitat destruction, and property and crop damage. The number of wild boar reported decreased significantly this year, but a few reports were received from the northern Interlake and southeastern Manitoba. Staff conducted field studies, using radio-collared wild boar, to learn more about their habitat use and behaviour. The Branch continues to receive and assess reports of boar at large.

Over 142,000 Canada geese staged inside Perimeter Highway in fall. The Department received many calls from the public about property damage and health risk from goose droppings. Winnipeg Airport Authority is concerned about threat to air traffic. The Urban Goose Working Group continued to investigate the problem by collecting water samples from ponds used by the geese and experimented with several devices to deter the geese from using the ponds. A management plan for urban geese is being drafted.

Furbearer Management

The program sustains populations of furbearers, promotes optimum harvests and economic, social, and cultural returns to trappers and their families. Both furbearer production and the number of each species sold by trappers are monitored. The program encourages humane trapping and promotes education and public understanding of furbearer management and the fur industry. Harvest and licence/permit information is based on the Fur Year, September 1, 2001 to August 31, 2002.

Marten populations have increased over the last two decades, owing largely to favourable habitat conditions, but are now expected to become more stable. Harvest levels in 2001/02 dropped to 13,959 from the previous year record of 33,060. Late season onset combined with very low prey numbers, especially in the southeast portion of Manitoba, were suspected causes. Harvests are expected to oscillate between these levels over the next several years.

Coyote harvests showed another large increase. Red fox harvests declined, likely because of reduced prey levels. Significant increases were seen with aquatic species such as beaver, otter, and muskrat as trappers focussed on these species during the marten downturn. Otter pelt prices have been increasing in the last few years, encouraging their harvest. The arctic fox population and harvest continue to be low because of very low numbers of lemmings.

United States continued to be the major market (80 per cent) for Canadian pelts, with Japan and the European Union countries taking the rest. Fur dealers were pursuing increased sales to China and Russia.

Staff work with Fur Institute of Canada's Trap Research and Development Committee on humane trapping devices and manufacturing standards. All approved devices are annually listed in *Manitoba Trapping Guide*, along with the timetable for implementation of AIHTS.

Additional effort was put into education services this year. Mandatory Trapper Education Program exams were completed by over 250 students, almost double the annual number. Workshops were held at Barrows, Cross Lake, Hollow Water, Lake Audy, Little Black River, Nelson House, Norway House, South Indian Lake, Split Lake, Swan River, Thicket Portage, Thompson, and Tramping Lake. Workshop instructors are from the Department and MTA. Tramping Lake and Wallace Lake field stations were used by staff and by students from Keewatin Community College Resource Management program, Sagkeeng First Nation, the Junior Forest Ranger Program in Eastern Manitoba, and Hollow Water First Nation for outdoor education and cultural purposes.

A professional trapper workshop, organized by the MTA in co-operation with Manitoba Conservation, was held in Swan River. About 30 trappers from the region were shown new techniques on furbearer trapping and pelt preparation.

Ninety-four free Youth Trapping Licences/Permits were issued, a decrease from 126 last year. Graduates, aged 12-17, of the Trapper Education Program join other jurisdictions in this no-fee program for young trappers.

Plans of Open and Registered Trapping Areas continue to be consolidated into a Director of Surveys registry, facilitating boundary identification for managers and trappers.

Tissue samples from various species were forwarded to various university researchers. Studies typically compared genetic differences between sub-populations of each species in Canada.

Table WI.4
12.4(g)2 Game and Fur Management

Expenditures by Sub-appropriation	Actual 2002-03	Estimate 2002-03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	658.6	11.29	621.8	36.8	
Other Expenditures	332.4		388.9	(56.5)	
Grant Assistance	89.9		89.9	0.0	
Total Other Expenditures	422.3		478.8	(56.5)	

Table WI.5

Fur Statistics, Year ending 31 August 2002

Species	Quantity	Average Price $	Production Value $	% of Total Value	Royalty Per Pelt	Royalty $
Badger	120	48.97	5,876	0.2	0.50	60
Bear	867	108.18	93,792	3.8	1.00	867
Beaver	28,345	26.28	744,907	30.4	0.50	14,173
Bobcat	11	156.43	1,721	0.1	1.00	11
Coyote	4,537	28.89	131,074	5.4	1.00	4,537
Ermine	2,983	4.24	12,648	0.5	0.05	149
Fisher	2,291	35.19	80,620	3.3	1.00	2,291
Fox, Blue	1	25.85	26	0.0	0.50	1
Fox, Cross	116	30.46	3,533	0.1	0.50	58
Fox, Red	1,653	30.76	50,846	2.1	0.50	827
Fox, Silver	14	23.50	329	0.0	0.50	7
Fox, White	73	20.85	1,522	0.1	0.50	37
Lynx	575	98.33	56,540	2.3	1.00	575
Marten	13,959	50.88	710,234	29.0	1.00	13,959
Mink	3,347	17.24	57,702	2.4	0.50	1,674
Muskrat	40,513	3.35	135,719	5.5	0.05	2,026
Otter	2,337	113.69	265,694	10.8	0.75	1,753
Racoon	2,568	18.99	48,766	2.0	0.50	1,284
Squirrel	5,849	1.30	7,604	0.3	0.05	292
Wolf, Timber	272	116.68	31,737	1.3	1.00	272
Wolverine	39	202.94	7,915	0.3	2.50	98
Total			$2,448,804			$44,948

Notes: 1. The Department's Fur Year runs from September 1 - August 31. Starting with the 1995-96 ***Annual Report***, statistics that relate to the Fur Year are based the most recent complete Fur Year. The 2002-03 Annual Report will contain information on the 2001-2002 Fur Year Ending August 31, 2002.

Table WI.6

Trappers and Value of Wild Fur Production 1991-92 to 2001-02

Year	Open Area Trappers (#)	Registered Trapline Trappers (#)	Estimated. Production Value ($)
1991-92	5,495	2,018	1,681,582
1992-93	5,851	1,870	1,518,850
1993-94	5,546	1,818	2,694,978
1994-95	5,611	1,993	2,539,052
1995-96	6,336	1,865	2,639,452
1996-97	4,827	1,975	3,715,834
1997-98	5,315	2,049	3,306,968
1998-99	4,750	1,856	2,037,022
1999-00	4,276	1,669	1,967,404
2000-01	4,355	1,827	2,769,981
2001-02	4,958	1,764	2,448,804

Notes: 1. The Department's Fur Year runs from September 1 - August 31. Starting with the 1995-96 *Annual Report*, statistics that relate to the Fur Year are based the most recent complete Fur Year. The 2002-03 Annual Report will contain information on the 2001-2002 Fur Year Ending August 31, 2002.

Table WI.7
Hunting Licences Sold

Type of Licence	Fee $	Number Sold	Revenue $
Game Bird			
Resident of Manitoba	19.63	10,872	203,098.36
Non-resident (Canadian)	60.75	682	40,835.50
Non-resident (Non-Canadian)	116.82	5,505	636,812.80
Wild Turkey			
Resident of Manitoba	20.56	791	15,580.96
Moose			
Resident of Manitoba	44.86	5,116	226,437.76
Resident of Manitoba – Conservation	35.51	260	9,027.90
Non-resident (Canadian)	255.14	17	4,325.38
Non-resident (Non-Canadian)	304.67	150	45,550.50
Elk			
Resident of Manitoba	44.86	4,865	218,243.90
Caribou			
Resident of Manitoba	40.19	507	20,376.33
Resident of Manitoba – Second	93.46	228	21,308.88
Non-resident (Non-Canadian)	304.67	138	41,602.79
Non-resident (Non-Canadian) – Second	700.93	48	33,596.64
Black Bear			
Resident of Manitoba	25.23	1,309	31,845.07
Non-resident (Canadian)	80.37	17	1,358.29
Non-resident (Non-Canadian)	172.90	1,827	313,034.90
Deer			
Resident of Manitoba	30.84	43,069	1,286,387.96
Resident of Manitoba – Second	16.82	549	8,701.18
Non-resident (Canadian)	116.82	864	100,443.48
Non-resident (Non-Canadian)	172.90	1,666	286,213.50
Youth Hunting Licence Package			
Resident of Manitoba	9.35	3,331	27,913.85
Total Licence Sales			
Resident of Manitoba		70,897	2,068,922.15
Non-resident (Canadian)		1,580	146,962.65
Non-resident (Non-Canadian)		9,334	1,356,811.13
Total		81,811	3,572,695.93
Replacement	Variable	193	1,449.25
Grand Totals		82,004	3,574,145.18

Notes:
1. Revenue figures are net (less vendor's commission)
2. Non-resident Caribou Licences are valid for both Canadian and Non-Canadian Hunters and are included with the Non-resident (Non-Canadian) totals.
3. Second Caribou Licences introduced for Residents and Non-residents in 1999.
4. Resident Conservation Moose Licences are issued as a 2 *Licence*/1 tag package (260 licences = 130 packages).
5. A Youth Hunting Licence Package for Residents of Manitoba introduced in 1999.

Table WI.8
Hunting Licence Sales and Revenue 1993-94 to 2002-03

	Game Bird		Big Game		Totals	
Year	**# Sold**	**Revenue $**	**# Sold**	**Revenue $**	**# Sold**	**Revenue $**
1993-94	23,251	747,913.00	59,712	1,843,791.50	82,963	2,591,704.50
1994-95	23,331	793,088.50	62,485	2,009,832.00	85,816	2,802,920.50
1995-96	24,511	848,222.00	67,883	2,210,534.00	92,394	3,058,756.00
1996-97	24,789	890,609.50	71,955	2,208,504.00	96,744	3,099,113.50
1997-98	23,446	1,056,020.70	63,668	2,402,913.96	87,114	3,458,934.66
1998-99	23,816	1,112,930.77	59,743	2,423,557.18	83,559	3,536,487.95
1999-00	22,096	1,070,616.01	67,058	2,610,746.10	89,154	3,681,362.11
2000-01	19,742	950,233.84	62,830	2,640,246.04	82,572	3,590,479.88
2001-02	18,287	824,801.91	64,407	2,659,738.55	82,694	3,484,540.46
2002-03	17,850	896,327.62	64,154	2,677,817.56	82,004	3,574,145.18

Notes:
1. $5.00 per licence for wildlife enhancement was introduced in 1997-98.
2. Second licences for Resident and Non-resident Caribou hunters introduced in 1999-00.
3. Youth Hunting Licence Package for Residents of Manitoba introduced in 1999-00.

Table WI.9
Wildlife Licence Revenue

Type of Licence	Revenue $
Hunting Licences	
Game Bird Licences	$880,746.66
Wild Turkey Licences	$15,580.96
Black Bear Licences	$346,238.26
Replacement Licences	$1,449.25
Caribou Licences	$116,884.64
Deer Licences	$1,681,746.12
Elk Licences	$218,243.90
Moose Licences	$285,341.54
Youth Hunting Licence Package	$27,913.85
Total – Hunting	$3,574,145.18
Commercial Licences	
Trapper Licences *	$37,004.00
Fur Dealer Licences *	$1,950.00
Tanner Licences *	$60.00
Taxidermist Licences *	$2,370.00
Shooting Preserve Licences	$660.00
Dog Trainer Licences	$415.00
Game Bird Farm Licences	$440.00
Amphibians and Reptiles Licences	$352.00
Total – Commercial	$43,251.00
Total Revenue	$3,617,396.18

* Reflects revenue for the 2001-02 Fur Year ending August 31,2002.

Habitat Management and Ecosystem Monitoring

The Section develops policies, plans and programs to secure, protect and enhance wildlife habitat on Crown and private land. The Section is responsible for the management of all lands designated for wildlife including Wildlife Management Areas (WMAs), Public Shooting Grounds, Refuges and Special Conservation Areas. Much of this is done through co-operative management and stewardship programs with government agencies, industry, non-government organizations and individuals.

The Section also co-ordinates the province's support for Manitoba's Heritage Marsh Program, which includes management for protection and enhancement, studies and inventories to support management recommendations, and development of viewing, interpretive and access facilities.

The stewardship focus of the Section includes administration of ***The Conservation Agreements Act*** and providing the link between the Branch and the Manitoba Habitat Heritage Corporation in the delivery of habitat enhancement and protection programs.

Another key activity of the Section is monitoring the quality of Manitoba's terrestrial environment, which includes collecting data to determine the effects of industrial emissions and land use changes on terrestrial ecosystem components (soil, vegetation, wildlife and habitat). Data that is collected and the extensive technical knowledge base of the Section provide scientific and technical support to maintain the quality of terrestrial ecosystems and restore previously degraded environments to healthy conditions.

The Section also provides technical environmental assessment input (wildlife and ecosystems) for development proposals such as environmental assessment reviews, land allocation, land entitlements, and sustainable development initiatives, so that land use decision-making in Manitoba will be based on sound ecological principles and all potential environmental effects are considered.

Wildlife Lands Unit

Wildlife Management Area Program

The management plan for Cape Churchill WMA neared completion. Public consultations will be undertaken regarding possible Heritage Park designation for the former Rocket Range facilities and environs, before the plan is finalized.

Habitat was enhanced in several Interlake WMAs. Standard boundary signs were produced for WMAs and Refuges.

Wildlife Management Areas Maintenance

Wildlife Enhancement Initiative funded maintaining and enhancing WMAs, including prairie enhancement in Narcisse WMA, forage plot development in Basket Lake WMA and weed control in various southwestern WMAs. An orientation sign was produced for the Brandon Hills WMA.

Land Management and Use

The Section reviewed over 300 land-use proposals for wildlife habitat impacts. These included applications for general permits and leases, sales, and exchanges of Crown land, Treaty Land Entitlement and municipal development plan and zoning by-laws and amendments. Policy proposals were reviewed to evaluate impacts on wildlife, habitat, land management, and use.

Heritage Marsh Program

The Program targets marshes known to be of extraordinary importance to the well being of wildlife and humans. There are nine proclaimed Heritage Marshes (Saskeram, Summerberry, Delta, Oak Hammock, Rat River, Grants Lake, Proven Lake, Lidcliff and Dog Lake), and 17 candidate marshes.

Support continued for research on the ecological health and future of Delta Marsh. Recognized locally and internationally as an important prairie wetland, the marsh ecosystem is undergoing significant negative change, in part due to relatively constant water levels brought on by the regulation of water levels on Lake Manitoba. Marshlands require a water regime that reflects natural wet and drought cycles to maintain their biodiversity. University of Manitoba, Ducks Unlimited Canada and Delta Waterfowl Foundation also supported fish and vegetation studies. Viewing opportunities were enhanced at the Delta Marsh Heritage Marsh site located on PR 240. Also, as part of the development plan for the site, a walking trail was developed.

Capital improvements at Oak Hammock Marsh Heritage Marsh included dyke improvements, repair and construction of interpretive facilities to improve viewing opportunities, and to maintain public safety. Access ramps were constructed in cells one and four to facilitate access by departmental staff.

Interpretive facilities were enhanced at Whitewater Lake with additional signage. Also, materials were purchased for the construction of a second observation tower that will be completed in 2003. Botulism is still a major threat to the mashes' bird life. The ongoing botulism-monitoring program was supported with a waterfowl-banding program conducted to determine the birds at risk.

The Ducks Unlimited Canada's Western Boreal Forest Initiative's - Pasquia Project Area, in northwestern Manitoba received major funding support. This project is being conducted by Ducks Unlimited Canada, in partnership with the North American Waterfowl Management Plan, Pew Charitable Trusts, Saskatchewan Environment, SaskPower, Louisiana Pacific Canada Ltd., Tembec Inc., Ducks Unlimited Inc. and Manitoba Conservation.

Ducks Unlimited Canada provided the first deliverable of the project, the Pasquia Earth Cover Classification in March 2003.

The range of purple loosestrife continues to expand, threatening important marsh ecosystems. Manitoba Conservation partnered with Ducks Unlimited Canada, City of Winnipeg, The Murphy Foundation, Manitoba Rural Adaptations Council (MRAC) and TransCanada Pipelines to support the Manitoba Purple Loosestrife Project. Project objectives are to control purple loosestrife through research, management, and expansion of biological control programs. The Department chairs the Project.

Critical Wildlife Habitat Program

This cost-shared program involves the Department, Manitoba Habitat Heritage Corporation (MHHC) and other agencies on a project-specific basis. It supports projects to identify, preserve, and manage critical habitats, especially native grasslands and habitats of species at risk. The Program supports stewardship initiatives, mixed-grass prairie inventories, land management including native prairie management, and extension. The Department and MHHC fund many of these programs while others are supported by other agencies. Critical Wildlife Habitat Program projects serve as a match for funds allocated by the federal Habitat Stewardship Program for Species at Risk.

Tall Grass Prairie Preserve

The Department continued to chair the Tall Grass Prairie Preserve Management Committee in 2002-03. Other agencies actively involved in the Preserve include MHHC, the Manitoba Naturalists Society, Environment Canada and the Nature Conservancy of Canada. The Committee produced an annual work plan for field activities at the Preserve and the Department supported delivery costs. Environment Canada's Habitat Stewardship Program for Species at Risk, Nature Conservancy of Canada, and the Manitoba Naturalists Society supported monitoring and management activities on the Preserve. The Committee also reviewed the Tall Grass Prairie Preserve Management Board Memorandum of Understanding, which will expire in May 2003, with the aim towards renewing this document for another five years.

Monitoring of rare orchids, insects, songbirds, permanent sample plots and management prescriptions continued to be among the key field activities on Preserve lands and new acquisitions. A Green Team staff person was provided to the Preserve to assist with these activities. Burn management was undertaken on several sites to enhance the grassland components. Plant identification signs were installed along the interpretive trail. Grazing demonstration sites were closely monitored because of concerns about invasive species such as red top and potential impacts on small white lady's slippers.

The Nature Conservancy of Canada purchased an additional 320 acres of tall-grass prairie near the centre of the Preserve.

The annual Prairie Day continued to be a successful event at the Preserve. It was well attended by local people, as well as visitors from outside the area. An education program for four school grades continued to be well-received and included field trips. Guided tours were offered through July and August. Recorded visitors to the Preserve included individuals from 35 Manitoba communities, five other provinces, the Northwest Territories, eight U.S. states, Switzerland and France.

Mixed Grass Prairie Projects

Inventory and grazing demonstration projects continued in mixed grass prairie region in southwest. Inventory targets were in Blind Souris River Valley, Spring Valley Flats and Broomhill areas. 145 sites (8872.6 ha on 166 quarter sections) were inventoried; 51per cent of this area was mixed-grass prairie habitat rated as C- or better. Rare species occurrences were recorded, including 27 sites with buffalograss and 44 sites with Sprague's pipit. A database of all sites was provided to MHHC to target future conservation agreement efforts. The database was also provided to PFRA to help identify environmentally sensitive lands for the Greencover Program. A Green Team staff position assisted with this project.

Monitoring of vegetative changes, livestock weight-gains and grassland bird responses to the twice-over rotational grazing system, tours, and workshops continued under the Mixed-grass Prairie Grazing Demonstration Project in 2002-03. This project expanded this year to include providing incentives to landowners to set up the twice-over system on their own lands. 2,440 acres of native pasture have been protected under seven five-year agreements to implement twice-over grazing systems. A field guide entitled *Common Native Pasture Plants of Southern Manitoba A Landowner's Guide* was produced by the project.

Additional funding for this project was provided by various agencies including Environment Canada's Habitat Stewardship Program for Species at Risk and EcoAction 2000, the Climate Change Action Fund Agricultural Awareness Partnership, and Ducks Unlimited Canada. Other project partners include MHHC, Manitoba Agriculture and Food, Manitoba Cattle Producers Association, and the West Souris River and Upper Assiniboine River Conservation Districts.

Urban Habitat Stewardship Project

MC was part of an Environmentally Sensitive Lands Plan Steering Committee in 2002-03. The purpose of this plan will be the management of natural areas containing wildlife and plant communities native to Manitoba within the City of Winnipeg.

The Naturescape sub-committee of the Capital Region Habitat Steering Committee, comprised of representatives from Manitoba Conservation, Manitoba Naturalist's Society, the City of Winnipeg, Environment Canada and Fort Whyte Centre continued to co-ordinate production of the *Manitoba Naturescape* document. This book targeted for printing in the fall of 2003 is an educational package with information on native species and project ideas to help organisations and individuals transform small urban and rural areas, including backyards, into habitat.

Ecosystem Monitoring Unit

Ecosystem Monitoring

The Unit identifies, evaluates and manages risks to the environment and human health, using innovative, scientifically credible problem-solving methods within the following general areas:

- monitoring quality of the terrestrial environment (soils, vegetation, and wildlife);
- providing scientific and technical support toward maintaining quality of ecosystems and restoring degraded environments to healthy condition; and
- collecting data to assist in understanding the complex interactions of ecosystem components (soil, vegetation, wildlife, and habitat) so that land-use decision making will be based on sound ecological principles and all potential environmental effects of developments are considered.

The Unit maintains a network of monitoring sites and conducts issue-based environmental studies to define terrestrial ecosystem quality. The Unit liases with peers in the scientific community and produces and distributes environmental information.

Activities include:

- Conducting studies to determine if soils, vegetation communities, and wildlife are contaminated.
- Documenting impacts of contaminants and land-use practices on terrestrial ecosystems.
- Establishing and maintaining data files.
- Monitoring to determine the degree and extent of contamination from accidental chemical release.
- Preparing reports and evaluating peer reports.
- Promoting development and application of guidelines, objectives and standards for terrestrial ecosystem components (includes participation in developing Canadian Council of Ministers of the Environment Canada-Wide Standards, and other guidelines and best practices for preventing environmental contamination from industry and other sources).
- Reviewing development proposals, identifying potential impacts, and making recommendations for licensing.
- Assessing applications for funding from the Sustainable Development Innovations Fund, Manitoba Climate Change Action Fund, and EcoAction2000.
- Providing scientific and technical support to government.
- Providing information and advice to the public, local and environmental groups, Aboriginal communities, consultants, industry, and other government jurisdictions.

Environmental Impact Assessment

One hundred fourteen ***Environment Act*** proposals or pre-clearances were reviewed, 43 percent more than last year. They included highway upgrades, wastewater-treatment facilities, crop protection warehouses, waste-disposal grounds, bulk fertiliser facilities, utility corridors, and town water supplies. Annual operating plans for Louisiana Pacific Canada, Tolko Manitoba, Tembec/Pine Falls Paper and Mountain Quota Holders Association were reviewed.

Forest-Wildlife Guidelines

The first version of *Forest Management Guidelines for Wildlife in Manitoba* (1989) was a major step in enhancing communication and co-operation between Wildlife and Ecosystem Protection and

Forestry Branches and the forest industry, and facilitated integration of forest and wildlife management activities.

The Branch initiated detailed review of *Guidelines* to incorporate current science and staff experience to produce. Concerns and issues raised by industry and staff, scientific literature, input from Regional Wildlife Managers, and information from other jurisdictions contributed to the second version, now complete. Additional documents have been produced, such as the shorter version comprised of operational directives. The intent is to work with other Branches (Forestry, Fisheries) and, ultimately, industry to develop a single set of guidebooks for forestry activities. To avoid repetition, issues such as access and access management, which appear in the Forest Practices document being produced by Forestry Branch, will be deleted from version 2 of the Forest Management Guidelines for Wildlife in Manitoba. The latter document will be reviewed internally by the Department prior to being circulated to other interested parties for review and comment.

Project WILD

Project WILD is an environmental education program, sponsored by the Canadian Wildlife Federation, emphasising wildlife and implemented under agreements with each province's wildlife agency. Project WILD activities are identified for use in specific outcomes for the Grade Four Science curriculum. Teachers are required to attend an in-service training workshop, usually conducted jointly by a wildlife specialist and a trained workshop facilitator. Last year, three Project WILD workshops were delivered; two during the teachers annual SAG Conference, and the other workshop was for staff of the Living Prairie Museum with some provincial park staff in attendance.

Partners in Flight Manitoba

Manitoba continues to participate with other provincial, federal and non-governmental agencies in the preparation of the Prairie Potholes Landbird Conservation Plan and the Prairie Potholes Waterbird Conservation Plan.

Bird populations were monitored in relation to grazing management as part of the Twice-Over Rotational Grazing Demonstration Project, led by the Department. This was the third year for this activity.

Manitoba Forestry Wildlife Management Project

This project (initiated 1991) creates computer models to predict impacts of forestry practices on supply and quality of wildlife habitat. Partners include Wildlife Habitat Canada, Tolko Manitoba, Tembec/Pine Falls Paper Company, Louisiana Pacific, Manitoba Model Forest, and Canadian Forest Service.

Separate and shared habitat requirements of over 200 species in boreal forest zone were identified. Since several species have overlapping requirements, 19 indicator species were selected for computer modelling. For example, moose habitat encompasses requirements for 62 per cent of other wildlife species in the Zone.

Literature-based habitat supply models were developed for the 19 species. The partners agreed on a protocol by which models may be changed when necessary, as new field data becomes available. The habitat suitability index model for pileated woodpecker may be adjusted based on data for this species for Duck Mountain (1999). At year end, a contractor was hired to complete the pileated woodpecker analysis now that the new forest resource inventory is available for the Duck Mountain. Models can be used to develop habitat suitability maps for Boreal Forest Zone. Resource managers can use these, along with other technologies, to guide long-term management plans for large forested areas. Although this phase of the project was completed, continued work will ensure that models are compatible with the new forest resource inventory.

Table WI.10
12.4(g)3 Habitat Management and Ecosystem Monitoring

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	759.2	15.00	907.5	(148.3)	
Other Expenditures	104.2		113.3	(9.1)	
Grant Assistance	465.0		645.0	(180.0)	
Total Other Expenditures	569.2		758.3	(189.1)	

Biodiversity Conservation

The Section provides information and services to sustain natural biological diversity.

Endangered Species Advisory Committee

Staff prepare wildlife species status reports for the Endangered Species Advisory Committee, established under ***The Endangered Species Act*** to advise the Minister on species at risk. Following recommendations from the Committee, eight species have been declared as extirpated, 11 as endangered, and nine as threatened under the Act. Declaring a species as "Extirpated", "Endangered" or "Threatened" assists its protection, thereby enhancing its survival in Manitoba. Population declines; limited distribution, low numbers, and dependence on specialised habitat are criteria used to assess the conservation status of species. Additional draft status reports for priority species have been prepared by section staff and are under review by the Committee. The distribution of fact sheets on Manitoba's Species at Risk continued, and plans are under way to expand the fact sheet series in the coming year. Artwork was purchased for a number of new fact sheets and additional partnerships with other agencies are being pursued for funding and distribution.

Federal-Provincial Initiatives under Accord for the Protection of Species at Risk in Canada

Participation on international and federal-provincial working groups and committees ensures that Manitoba's efforts to conserve biological diversity are co-ordinated with those of other countries and Canadian jurisdictions. Implementing programs for species at risk and biodiversity demonstrates Manitoba's commitment to the Accord and the Canadian Biodiversity Strategy.

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC): Manitoba is one of 29 voting members of this committee that designates nationally significant species at risk. Staff reviewed and assessed species status reports, enabling our contribution to national designation meetings. The Canada ***Species at Risk Act*** **(*SARA*)**, assented to on June 5, 2003, will legally establish COSEWIC. Manitoba contributed to restructuring COSEWIC and its procedures accordingly. The review process incorporated a new World Conservation Union-based assessment criterion system and the establishment of an Aboriginal Traditional Knowledge subcommittee.

The National Recovery Working Group: Manitoba is an active member of this working group that facilitates the recovery of nationally endangered wildlife. The national recovery program for species at risk was redesigned to better meet Accord requirements and to integrate recovery requirements of the Canadian ***Species at Risk Act*** **(*SARA*)**. A Recovery Operations Manual (ROMAN) has been drafted to assist national recovery teams and more local recovery action groups. This manual describes the species recovery processes, responsibilities and products required under ***SARA***. Three documents will initiate and guide recovery action for each endangered or threatened species: *Response Statement*, *Recovery Strategy*, and *Recovery Action Plan*.

Report on the General Status of Wildlife in Canada: In 1998, the Canadian Endangered Species Conservation Council requested that federal and provincial/territorial governments co-operate to assess and report on general status of wildlife (including plants) every five years, starting in 2000. A federal-provincial working group was established. Manitoba reviewed and assessed the general status of hundreds of plants and animals, including ferns, orchids, butterflies, freshwater fishes, amphibians, reptiles, birds, and mammals. Work is underway towards producing the next report (2005) that will re-assess those species included in the 2000 report, plus new species groups including all the remaining vascular plants, dragonflies, tiger beetles, marine fishes, and crayfish. Considerable resources are required, but the results will help set conservation priorities for many species at risk and biodiversity programs and ***The Endangered Species Act***.

Biodiversity Convention Office: Manitoba participates on a Federal-Provincial-Territorial Biodiversity Working Group that is implementing programs outlined in the report to Wildlife Ministers, *Working Together—Priorities for Collaborative Action to Implement the Canadian Biodiversity Strategy 2001-2006*. Implementation priorities include:

- Biodiversity science agenda, including bio-infomatics;
- Reporting on status and trends in biodiversity, including monitoring;
- Alien invasive species; and
- Eco-citizenship, including stewardship.

Conservation Data Centre

Section staff are responsible for the maintenance and growth of the Manitoba Conservation Data Centre's (CDC) biodiversity information database, a one-stop source of information on Manitoba's plant and animal species. The CDC is a member of an international network of biodiversity information centres known as NatureServe, http://www.natureserve.org. The Section also manages programs related to species at risk and other broad, biodiversity-based programs.

Information Management

The section responds to hundreds of information requests annually. Requests came from federal and provincial governments, consultants, Nature Conservancy Canada, Ducks Unlimited, Manitoba ATV Association, Natural Heritage programs in the US, secondary schools, universities and others (organisations, industry and individuals). Most requests were for information to assist with environmental impact assessments and protected area-planning initiatives.

Last fall the CDC completed an upgrade of its Biotics® database software. This new program will allow for more accurate representations of biodiversity within the province and improved ability to provide useful land management information. As a part of a North American network of similar organisations under the umbrella of NatureServe, the CDC completes an annual exchange of data integrating Manitoba's data with the entire network.

Table WI.11
Status of the Manitoba Conservation Data Centre's Biodiversity Information Database

Information Type	Plant	Animal	Community	Other[1]	Total
Number of Element Occurrences[2]	1,760	1,781	70	439	4,050
Elements Tracked Provincially[3]	2,751	1,238	174	8	4,171
Provincially Ranked Elements[4]	2,211	373	174	0	2,758

Notes:

1. Includes elements such as waterbird colonies, and snake and bat hibernacula.
2. A specific example of a plant, animal or vegetative community at a specific geographic location.
3. The Element Provincial Tracking database allows information to be gathered on plant, animal, community and other elements.
4. Provincial plant, animal or community element ranks to help prioritize conservation efforts.

Botany/Ecology

Rare Plant Surveys

New fieldwork was completed for 14 species, and resulted in a total of 80 new or updated rare species occurrences. Highlights included collection of information on a number of species at risk including Buffalo grass (*Buchloe dactyloides*), Small white lady's slipper (*Cypripedium candidum*), Riddell's goldenrod (*Solidago riddellii*), Culver's root (*Veronicastrum virginicum*).

Co-operative Initiatives

Co-operative efforts continued with neighbouring jurisdictions:

- Work continued on two eco-regional planning exercises with Nature Conservancy of Canada, The (US) Nature Conservancy, and neighbouring provinces and states. A plan for the Superior Mixed Forest region of southeastern Manitoba was completed, and a plan for the Aspen Parkland of southwestern Manitoba was initiated.
- The Biodiversity Conservation Section partnered with Nature Conservancy Canada and The (US) Nature Conservancy to begin a site conservation plan for Manitoba's Tallgrass Aspen Parkland site. This plan, once completed, will identify priority conservation sites and activities. in this internationally recognised globally endangered ecosystem.
- Manitoba and other provinces are co-operating with Parks Canada, Canadian Forest Service, NatureServe and others to develop a Canadian National Vegetation Classification, based on existing models used by NatureServe and its provincial partners.
- A regional recovery team was formed to begin work on plant species at risk throughout the Canadian Prairie Provinces. Representatives from the provincial and federal agencies in Manitoba, Saskatchewan and Alberta have agreed to work co-operatively to meet national recovery requirements for COSEWIC-listed plant species.

Zoology

Invertebrate Monitoring and Assessment

The Section began co-operating with the J. B. Wallis Entomological Museum at the University of Manitoba to develop and test protocols for sharing information from the Museum's collection in a manner that is compatible with the Conservation Data Centre database and Biotics GIS application. Two groups were selected initially, a small group of beetles, and spiders. Developing protocols and data formats will ensure that the Section can use additional information in the future for general status assessments of a variety of species.

An update to the province's checklist of spiders noted 534 species currently found in Manitoba, up from 483 reported in 1992. New species included a number of previously unidentified specimens held at the J. B. Wallis Museum and species newly discovered in field collections.

The volunteer-based Dragonfly Survey has identified eight species new to Manitoba since it began in 1999. Over 230 volunteers have contributed over 1,000 specimens to date. The survey data contributed to both provincial and national status assessments. A national status assessment workshop was held in Winnipeg in October where 13 experts on dragonflies in Canada assessed 208 species. National, provincial, and territorial draft conservation status ranks were assigned and the results shared with COSEWIC. The final report will be completed in December 2003.

Narcisse WMA Snake Dens

Many Manitobans and non-residents visit the red-sided garter snake hibernacula at Narcisse each spring. Staff interpreters are on hand during times of peak emergence to explain the snakes' life history and significance of the dens. The abundance of snakes provides an opportunity for snake researchers to conduct studies on the ecology, physiology and reproductive biology of the species and Narcisse continues to attract biologists from as far away as Oregon and Australia.

During the 1990s, the number of migrating snakes killed annually on PTH #17 adjacent to Narcisse snake dens became a concern and mitigation efforts began with the Narcisse snake tunnel project. The project was completed this year with the installation of three culverts under the highway to provide a safe route for the snakes. Thirteen culverts, with drift fences to guide snakes towards the culverts, have reduced mortality by about 75 percent. Refinements to the fences are expected to reduce mortality even further.

Peregrine Falcon Recovery Project

During 2002, a pair of Peregrine Falcons nested on the Radisson Hotel in downtown Winnipeg but the pair failed to return, nor did the pair that normally nest on the MacKenzie Seeds building in downtown Brandon. Both nesting sites have been used by this endangered species for several years. Monitoring of these and other potential sites will continue by volunteers with the Peregrine Falcon Recovery Committee. Parkland Mews, in conjunction with Manitoba Conservation prepared a brochure, "Peregrine Falcon in Manitoba," In partnership with Manitoba Conservation, Parkland Mews also drafted a Recovery Management Plan for the Peregrine Falcons in Manitoba.

Piping Plovers

Funding from the Manitoba Special Conservation Fund and the federal Habitat Stewardship Fund allowed expanded piping plover monitoring and stewardship activities to be undertaken in 2002. A preliminary management plan and recovery strategy for Manitoba was completed, including analysis of historic sites and other suitable habitat. A total of 27 adults (13 pairs) were found nesting at Clandeboye Bay, Twin Lakes Beach, Gull Bay, Grand Marais and Grand Beach. High water levels on West Shoal Lake, a primary nesting area in the past, precluded any nesting at this location for the fifth consecutive year. A total of 16 nests were monitored including three re-nests. Half were successful raising approximately 14 chicks to fledging age. Recovery activities undertaken in 2002 included fencing and signage at three major nesting sites to reduce the chances of nests being disturbed by humans or ATV's, exclosure cages installed on several nests to protect them from predators, and a Piping Plover Guardian Program at Grand Beach to protect nests and increase public awareness and participation at this key site. A provincial Piping Plover Recovery Action Group is currently being formed to direct future stewardship and recovery activities. This group includes representatives from Manitoba Conservation, the Canadian Wildlife Service and several other interest groups and individuals that have been actively involved in Piping Plover recovery in Manitoba.

Eastern Loggerhead Shrike Monitoring & Stewardship

Monitoring of nesting populations of the endangered eastern (*migrans*) subspecies of the loggerhead shrike in southeastern Manitoba revealed a decline to seven nesting pairs and one single bird during 2002 -- down 32 percent from a high of 11 pairs in 2000. Most continue to be found in a core nesting area in the RM of West St Paul on the northern outskirts of Winnipeg, but one pair in 2002 was found in a golf course on the west end of Winnipeg. All seven pairs nested successfully, raising a total of 28 young. Stewardship and monitoring of eastern loggerheads have been co-ordinated by the Eastern Manitoba Recovery Action Group (EMRAG), which includes representatives from Manitoba Conservation, Manitoba Cattle Producers Association, Manitoba Hydro, Ducks Unlimited, the Portage Natural History Group, and other local interest groups and individuals. In 2002, 17 landowners in or near the core nesting area participated in voluntary habitat stewardship projects to restore or enhance habitat for eastern loggerhead shrikes. Stewardship initiatives also include landowner awareness, participation, and extensive public education.

Grassland Bird Species Monitoring and Management

Wildlife native to prairie has suffered greater losses since settlement than wildlife from any other habitat. The Grassland Species at Risk Program oversees monitoring and management of grassland species at risk. Target species include those designated as threatened or endangered under ***The Endangered Species Act***, including the burrowing owl, ferruginous hawk, loggerhead shrike, Sprague's Pipit and Baird's sparrow.

Despite intensive management and re-introductions of burrowing owls in Manitoba since the mid-1980s, nesting populations have dwindled to where there are probably just a few pairs remaining (none were reported or seen in 2002, but a few pairs are still believed to occur in the province). Declines have been equally steep in Saskatchewan and Alberta, and the species is in danger of being extirpated in Manitoba and across the Canadian prairies.

Nesting ferruginous hawks returned to Manitoba in 1984, after an absence of nearly 60 years. More widespread protection, enhanced public attitudes towards hawks and raptors in general, and provision of nesting platforms led to population increases during 1980s. By 1990, the nesting population had increased to 56 pairs. Nesting populations in southern Manitoba remained stable until the mid-1990s when a widespread population crash in its primary prey, the Richardson's ground squirrel or prairie gopher, across the Canadian prairies resulted in reduced ferruginous hawk nesting success and eventual declines. A total of 36 nesting pairs were found in southwest Manitoba during 2002, representing a 35 percent decline from the 55 pairs that were recorded in 1996. As in other recent years, more than three-quarters of nesting pairs used artificial nest platforms. These tend to be more successful than natural nests because they are usually placed in sturdier trees, are near extensive hunting pastures, and away from potential disturbance. Other encouraging signs during 2002 included increased prey abundance, increased nesting success (nearly three-quarters of the pairs were successful), and a total of 69 young raised to fledging age.

Nesting populations of the western loggerhead shrike in southern Manitoba continued to decline as only 59 pairs were observed during 2002 -- an 82 percent decline from the 327 pairs that were recorded as recently as 1993. Populations have undergone serious declines and productivity has been reduced by atypical cool, wet weather during key stretches in most summers since 1993. The 78 percent nest success rate among 27 nests that were monitored to fledging age in 2002 was much higher than the 25-49 percent success rates observed in other years since 1993. A total of 153 young and 12 adults were banded in 2002. Banding data since 1987 has revealed unusually low return rates of shrike adults and young, suggesting that mortality on migration and in wintering areas may be contributing to ongoing declines.

Owl Monitoring

The Great Grey Owl monitoring project entered its 19th year. Nesting density and reproductive success rebounded from the crash in 2001 due to high prey abundance. Collaborative efforts with the University of Guelph were initiated to examine the potential impact of West Nile Virus on Manitoba's provincial bird emblem.

Over 260 owls were detected by 225 volunteers who completed 138 survey routes for the 2002 Manitoba Nocturnal Owl Survey. This survey was supported in part by Manitoba Hydro, Delta Marsh Bird Observatory, Partners in Flight Manitoba, and Bird Studies Canada. A description of this survey can be found at http://www.bsc-eoc.org/regional/mbowls.html

A new volunteer-based daytime survey, specific to Short-eared Owls, was initiated to track populations of this species of conservation concern in North America. This species is inadequately monitored in Canada or Manitoba by existing programs such as the Christmas Bird Count, Breeding Bird Survey and the Nocturnal Owl Survey.

Public presentations based on the above owl monitoring programs were given in Winnipeg (Envirothon), Oak Hammock Marsh, and Carman.

Colonial Waterbirds

Staff contributed to drafts of the National Colonial Waterbird Conservation Plan, and participates on the National Colonial Waterbird Working Group.

Breeding Bird Survey

Staff promote and co-ordinate involvement in the North American Breeding Bird Survey (BBS). A record 48 BBS routes were surveyed by volunteers throughout Manitoba during 2002, including one done by boat (Benson Bay), one by ATV in a national park (Riding Mountain), and one beyond the treeline in northern Manitoba (Churchill). The BBS assesses changes in abundance and distribution of birds along predetermined routes that are surveyed using standard protocol at the same time of the year and by the same individuals each year. It is especially useful for assessing the status of songbird species that are not monitored adequately by other surveys. Local and national BBS data reveal that more species are increasing than are decreasing. The data also reveals that certain groups, such as grassland-nesting birds, have undergone significant declines since BBS surveys began (1966).

Polar Bears

The ***Polar Bear Protection Act*** was proclaimed and regulations enacted. The Act and regulations govern the circumstances under which a polar bear may be placed in captivity and the facility standards and level of care that must be provided for a captive polar bear.

Woodland Caribou

A review of Woodland Caribou Conservation Strategy was initiated for biannual update in 2002. The Strategy identifies four ranges at risk and ranks research and management initiatives.

Radio-collared caribou continue to be monitored in the north-central part of Manitoba in disturbed and undisturbed areas in the Kississing-Naosap range. Caribou were also radio-collared on the Wapisu Range by Nelson River Cree Nation and Manitoba Hydro to study population movement and habitat utilization.

An integrated woodland caribou/forest management plan, developed with Tembec Industries, Pine Falls Operations, the Manitoba Model Forest, First Nation communities and other partners, continues to be implemented on Owl-Flintstone Lakes range (east of Lake Winnipeg) and the Atikaki-Berens ranges. Monitoring of these radio-collared caribou continues and recaptures were made, collars replaced and the data downloaded for analysis.

Chitek Lake Wood Bison Project

The Chitek Lake Wood Bison herd continues to grow and is estimated to be about 150 animals. Discussions on a long-term management strategy continued with First Nation Representatives. Branch staff participated in the management planning process to change the Chitek Lake Park Reserve to full park status.

Table WI.12
12.4(g)4 Biodiversity Conservation

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	306.5	6.00	347.1	(40.6)	
Total Other Expenditures	66.7		80.3	(13.6)	

Canada-Manitoba Waterfowl Damage Prevention Agreement

Average fall conditions in the south enabled farmers to complete cereal harvest by mid-September, before large numbers of waterfowl staged there. Despite late summer precipitation that delayed harvest in the southern part of the province, waterfowl crop damage was average across Manitoba. Waterfowl Crop Damage Prevention Program cost about $302,000, of which Canada contributed $151,000.

The Program operated two feeding stations and eight Crown lands lure crops in damage-prone areas. The Program lends farmers cracker shells, scarecrows and propane scare-cannons to protect crops. A total of 23 scare-cannon depots were set up to provide farmers ready access to equipment.

The Program operated under the Canada-Manitoba Waterfowl Damage Prevention Agreement. A new Agreement was signed (March 2002) and maintains Canada's participation in, and cost-shared funding of, the Program until 2004.

Table WI.13
12.4(g)5 Canada-Manitoba Waterfowl Damage Prevention Agreement

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Other Expenditures	342.0		350.4	(8.4)	

Wildlife Habitat Enhancement Initiative

The Fund provided a grant to Manitoba Habitat Heritage Corporation in support of the co-operative Critical Wildlife Habitat Program. The grant funds supported stewardship initiatives targeted at species at risk and prevention activities, including mixed-grass prairie inventories, land management, (including native prairie management), and extension initiatives.

The Initiative continued to support wildlife and habitat management projects with funds from a special impost on hunting licences. Hunter-funded projects included:

- Enhanced, effective program of aerial surveys for big game monitoring and setting hunting seasons. The Big Game Monitoring Program, which was the basis for hunting seasons, became outdated. Enhanced funding has enabled restoration to one of the best programs delivered in Canada.
- Improved problem bear management near Provincial Parks. Live-trapping and relocating problem black bears is costly and may be ineffective. Further study may point to the need for alternate means of resolving bear concerns.
- Providing enhanced information and service to hunter inquiries about big game and game bird seasons and opportunities. Every year, large numbers of telephone inquiries are received about where and how to hunt, many from non-residents who bring substantial tourism income. This program provides resources to ensure that these calls are handled courteously and efficiently.
- Fieldwork to assess and control escaped wild boar, to protect wildlife and ecology. In view of deepening concerns about habitat destruction and disease transmission (to wildlife and domestic swine), the Department continues to monitor the prevalence of escaped wild boar in Manitoba and has initiated contact with wildlife management agencies in other provinces and states.
- Support for threatened woodland caribou herds. Delineating habitat requirements for woodland caribou, using tracking by telemetry, and assessing these issues in light of economic development plans (such as forestry) is essential to survival.
- Maintenance for Wildlife Management Areas. Signs have been posted, forage plots developed, and necessary weed control undertaken.
- Enhanced public information on Branch website. As the Internet becomes increasingly important to gathering and disseminating information wanted by the public, updating and enhancing our website becomes critical to wildlife management.
- Support to Canadian Co-operative Wildlife Health Centre that provides valuable information and advice on wildlife diseases and their management.
- Enhanced Chronic Wasting Disease (CWD) surveillance was funded through this initiative. Collection and testing of 350 hunter-harvested white-tailed deer from southwestern Manitoba and 200 elk from the Riding Mountain area was undertaken. Information about CWD was provided to hunters and the public.

Table WI.14

12.4(g)6 Wildlife Habitat Enhancement Initiative

Expenditures by Sub-appropriation	Actual 2002/03 $	FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Other Expenditures	274.3		225.0	49.3	

Pollution Prevention

Pollution prevention is defined as the use of processes, practices, materials, products, substances or energy that avoid or minimise the creation of pollutants and waste, and reduce the overall risk to the environment and human health. Working co-operatively with local governments, non-government organisations, business and industry associations and other agencies, the Branch promotes pollution prevention initiatives, and supports these initiatives through grant funding programs. The Branch develops regulations and programs to protect the environment and develops and distributes educational and informational materials to client groups.

The Waste Reduction and Prevention (WRAP) Act and ***The Ozone Depleting Substances (ODS) Act*** are administered by the Branch. The Branch manages the Sustainable Development Innovations Fund (SDIF) and three of its broad allocations, and co-chairs the working groups responsible for government-wide implementation of Procurement Guidelines and Code of Practice, among other duties under ***The Sustainable Development Act***. Branch staff actively participate in a variety of charitable organisations, including United Way, Water for People, and the Manitoba Government's All Charities Campaign.

Branch activities are divided into four program areas:
1. Waste Reduction and Prevention,
2. Pollution Prevention,
3. Environmentally Sustainable Practices, and
4. Funding Programs

Throughout this section, links have been made where appropriate to the principles and guidelines of sustainable development and the sustainable development procurement goals.

Waste Reduction and Prevention

The Branch works to reduce solid waste going to waste disposal grounds. Significant progress was made in developing and promoting sustainable alternatives to waste disposal.

Since ***The Waste Reduction and Prevention Act*** was adopted (1990), recycling has increased substantially. Over 50% of packaging and paper products generated by households are now being recycled. Manitoba's product stewardship programs continue to provide dedicated resources to improve diversion of materials from landfills.

The Branch continued to focus on programs that aim to:
- promote producer responsibility for post-consumer product management
- encourage strategic public private sector partnerships to address environmental issues
- reduce volume of waste generated and disposed;
- separate hazardous from non-hazardous waste; and,
- improve waste management facility operations.

The Branch continued to support the activities of the Northern Waste Management Committee and development of regional recycling networks throughout the province, and supports and promotes partnerships with non-government organisations to provide public information on waste reduction, composting, pollution prevention, green commuting and climate change.

The Branch emphasised the development of composting facilities by municipalities to divert organic waste from landfill in 2002/03 and supported the promotion of backyard composting events in Brandon and Winnipeg.

Work continued on the implementation of the *HHW (Household Hazardous Waste) Stewardship Regulation* and National Electronics Stewardship Program as well as green procurement practices and policies for government.

Staff participated on such committees as the City of Winnipeg's Waste Minimisation Advisory Committee, CCME Composting Task Group. The Branch also promoted and supported activities related to Waste Reduction Week.

Used Oil Recycling

The *Used Oil, Oil Filters and Containers Stewardship Regulation* prohibits sale of lubricating oil products unless the vendor is registered and belongs to the stewardship program operated by Manitoba Association for Resource Recovery Corporation (MARRC). MARRC has 117 members. As part of their membership agreement, vendors must pay Environmental Handling Charges based on product sales. There were 48 Eco-Centres established in partnership with municipal governments and ten privately operated depots.

MARRC'S five-year business plan was circulated for public comment and renewed through to 2007. The letter of approval requires improved performance in three key areas:

1. improving convenience, particularly in the Winnipeg area,
2. increasing the recovery of containers and
3. enhancing the recycling of used filters.

Purchases of lubricating products declined slightly from last year. Oil recovery remained steady at 11.8 million litres of used oil out of 15 million litres available. Filter recovery grew slightly to 1,500,000 filters of 2 million available. Container recovery increased 5% to 164,000 kgs while 900,000 kgs are available. MARRC's recovery network expanded by adding 4 Eco-Centres. A retail store in northwest Winnipeg received an environmental licence to collect oil, filters and containers from the public.

Multi-Material Recycling

The Manitoba Product Stewardship Corporation (MPSC) is a statutory corporation, established in 1995 under the *Multi-Material Stewardship (Interim Measures) Regulation*. Managed by a 10-member stakeholder Board of Directors, the mandate of the MPSC is to implement waste-reduction programs for designated product packaging and paper products. In FY 2001/02, the Corporation supported 178 recycling programs managed by Manitoba municipal corporations, Community Councils, First Nations and provincial parks. The MPSC collected $7 million in container levies and paid out over $5.8 million in Municipal Recycling Support Payments to recycling program operators. Manitoba's recycling system recovered over 43,800 metric tonnes of an estimated 87,650 metric tonnes (50%) of eligible material. On average, Manitobans recycled an estimated 39 kgs/person from their homes in 2001, representing an increase of 13% over the previous year. At the time of reporting, figures for FY 2002/03 were not yet available.

The Branch participated in the MPSC's regional recycling meetings in Brandon, Winnipeg and Thompson as well as the MPSC's Board Governance Review process.

Table P2.1

Material Recovery Rates 2001

Eligible Material	Total Tonnes Recovered	Measured Generation (Tonnes)	Recovery Rate
Newspapers, magazines, flyers, telephone directories	26,957	35,651	76%
Glass containers	5,474	13,862	39%
Boxboard	2,281	9,683	24%
Corrugated Cardboard	4,496	10,722	42%
Steel Cans	1,656	6,226	27%
PET #1 plastic containers	1,078	2,744	39%
HDPE #2 plastic containers	871	3,881	22%
Aluminum cans	631	1,894	33%
Polycoat and Aseptic containers	391	2,117	18%
#5 & 7 Plastics	7	871	0%
Total	**43,841**	**87,651**	**50%**

Tire Recycling

The Tire Stewardship Board's (TSB) Scrap Tire Recycling Program (established 1995) is funded by a $2.80 levy on new tires sold for licensed vehicles.

Tire recycling rates rebounded to 1,082,823 PTEs (Passenger Tire Equivalents) from last year's 646,000 PTEs. The previous year's rate was lower because of a fire at the Tire Recycling Corporation of North America facility in Winkler. A new facility with additional recycling capacity was constructed to replace the Winkler facility.

Five active processors recycled 7,993 tons, or 1,082,823 Passenger Tire Equivalents (PTEs). Tire sales increased 5.4% to 799,317 tires. The Board raised $2,276,318 in levies and paid recyclers $2,037,267 million in credit incentives. Administrative expense was $304,895 and the Board had an operating deficit of $170,762.

Table P2.2

Products from Manitoba Scrap Tires in 2002/2003

Product	PTEs	
Used Tire Shred		
• Manitoba Projects	503,284	46%
• U.S. Projects	311,347	29%
Molded Products	140,864	13%
Tire Derived Fuel (U.S.)	72,013	7%
Blasting Mats	41,662	4%
Cut Products	13,653	1%
TOTAL PTEs Recycled	**1,082,823**	

Regional Waste Management

The Branch continues to pursue development of regional waste management systems. A waste management survey identified 57 waste transfer stations in operation in Manitoba. Over 200 landfills have been closed since 1991. There are currently 262 landfills in operation, including 14 Class 1 facilities serving populations of over 5,000.

The Branch continued to support regional waste management planning and recycling network development activities with grant support from the Waste Reduction and Pollution Prevention (WRAPP) Fund, including support for enhanced provincial park recycling and regional recycling systems in Southeast Manitoba, Thompson, and The Pas Regions..

Draft operating guidelines for waste disposal grounds, composting operations, and waste transfer stations were developed, further work will be undertaken to finalize guidelines.

Household Hazardous Waste (HHW)

The Branch developed the *Hazardous or Prescribed Household Waste Stewardship Regulation* under the ***WRAP Act***, based on the results of the consultation process on *A Plan to Manage Household Hazardous Waste in Manitoba*. The regulation would impose a requirement for distributors of 11 product streams to take responsibility for managing the wastes associated with their products. The regulation is under consideration by the Manitoba Government.

In 2002/03, The Branch assumed responsibility for managing the contract with Miller Environmental to support household hazardous waste management. Under the contract, 30 collection events are held throughout Manitoba annually. The HHW collection program sponsored 14 rural and 16 Winnipeg events and collected 478 tonnes of household hazardous wastes. This total was 5% less than was collected in 2001/02. A total of 5,559 vehicles were serviced.

Staff participated on the Federal-Provincial Electronics Product Stewardship Working Group to develop a national solution to the problem of electronic waste. Staff also assisted the first large effort to collect waste electronics in Manitoba with the Thomas Sill Foundation Inc., and many local sponsors. Collection depots were set up in five locations in Winnipeg and one in Stonewall on a weekend in October. The volunteers collected 91,800 kgs of old electronics and ensured the materials were managed properly. A report on the findings of the project will be available in 2003/04. Funding assistance of $50,000 was provided through the SDIF.

Pollution Prevention

The Branch works with various partners, promotes initiatives to prevent pollution and supports these initiatives through grant funding.

Business/Industry Program

Staff continued to participate on the steering team for the Power Smart Eco-Efficiency Pilot Project. The project, led by Manitoba Hydro, with participation from provincial and federal agencies, was designed to support companies in reducing use of energy and water, and generation of solid waste and toxic materials. Under the two-year project, 33 companies were contacted to determine their interest in identifying and implementing changes in their operations. Of these, 14 agreed to an initial walk through, and five contracted a consultant to undertake a full audit. Funding assistance of up to $5,000 was provided to participating firms for the cost of the audits. A final report is expected in 2003/04. The project would then move into its next phase, to assist the businesses that are able to proceed in implementing recommendations from their audits. Manitoba Conservation provided funding of $20,000 through the WRAPP Fund to support the pilot project.

Branch staff represented Manitoba on the CCME Pollution Prevention Network and promoted and supported the Pollution Prevention Awards Program and Recognition Program. The awards program recognises companies and organisations showing leadership in pollution prevention. Each year, a panel of industry, non-government and government representatives selects award winners from small, medium and large businesses, organisations, developers of pollution prevention innovations, and organisations using greenhouse gas reduction initiatives. Mountain Equipment Co-op, a Winnipeg sustainable retail facility, received the 2002 award in the innovations category and Manitoba Hydro's Selkirk Generating Station received an honourable mention in the greenhouse gas reduction category. The awards program was supported through a $5,000 grant from the WRAPP Fund.

Staff assisted in the development and implementation of a "Green Marina" Pilot Project with the Town of Gimli to demonstrate to boaters how they can reduce their impact on the environment. The project assessed boater activity, marina management and water quality and produced a series of fact sheets for boaters.

Staff engaged in voluntary partnerships with Manitoba Heavy Construction Association, Chambers of Commerce, the Manitoba Golf Superintendents Association and the Canadian Manufacturers and Exporters. The Branch continues to work with, and provide information to a variety of government, academic, industry, and consumer organisations. The Branch continued to work with the Manitoba Environmental Industries Association (MEIA) and the Manitoba Quality Network (Q-NET) to support training on such topics as pollution prevention planning and workplace health and safety. The MEIA received $4,000 from the WRAPP Fund for workshops on organic composting and Canada-wide standards.

Staff assisted in the delivery of the Environmental Management Systems Course at Red River College, participated in a variety of Manitoba Heavy Construction Association training seminars on Environment, Health and Safety, participated in the National Working Group to reduce emissions from Steel Operations and was a member of the CCME stakeholder planning committee on mercury switch life cycle management.

Ozone Depleting Substances

The Ozone Depleting Substances Act and Regulation were established to minimise and avoid the ultimate release of ozone-depleting substances (ODS) to the environment for the protection of the stratospheric ozone layer.

As a participant on the Federal-Provincial Working Group on Ozone Depleting Substances and Halocarbon Alternatives, the Working Group met twice and held conference calls to consult on provincial and federal harmonisation approaches for implementation of the *Strategy to Accelerate the Phase-out of CFCs and Halon Uses and to Dispose of the Surplus Stocks*, and the National *Action Plan (NAP) for the Environmental Control of Ozone Depleting Substances and Their Halocarbon Alternatives*, to meet national and international commitments under the Montreal Protocol. The 2001 NAP approved by the Canadian Council of Ministers of the Environment (CCME) calls for revising Provincial regulations.

In partnership with the Manitoba Ozone Protection Industry Association (MOPIA), consultations were initiated on proposed amendments to the ODS regulation to establish specific phase out dates that will prohibit the refilling of refrigeration, air conditioning and fire protection equipment with chlorofluorocarbons (CFCs) and Halons. Consultations on the proposed amended regulatory framework included regulation of halocarbon alternatives, such as hydrofluorocarbons (HFCs), strategies to encourage the orderly transition of the use of CFCs and Halons to alternative substances and technologies, and initiatives to assure the safe disposal of surplus stocks through the implementation of an industry stewardship halocarbon program. These new proposed measures will help to enhance Manitoba's ODS management program and climate change initiatives.

Discussions were initiated to establish halocarbon stewardship responsibilities to manage and safely dispose of surplus stocks. Manitoba's refrigeration, air conditioning and fire protection industries will play a key role in the development of management strategies. The commercial (stationary) refrigeration, air conditioning sector has already established a national stewardship program, Refrigerant Management Canada (RMC), for the management and destruction of CFCs. Implementation of Manitoba's proposed regulatory amendments is anticipated during FY 2003/04.

Staff initiated a Manitoba White Goods ODS Management Project in partnership with MOPIA. The project was initiated in response to the CCME 2001 NAP. The project proposes to develop a consistent approach to the life-cycle management of white goods or domestic appliances in Manitoba. It aims to understand the costs, logistics, and services required to establish and provide a common approach to dispose of white goods, including ODS recovery at waste disposal grounds or designated transfer/recycling areas. Manitoba Conservation provided funding of $25,000 through the WRAPP Fund to support the pilot program. A final report is expected during FY 2003/04.

The Branch reviewed and administered the Annual Appointment Agreement between Manitoba Conservation and MOPIA. Appointment allows MOPIA to undertake certain administrative tasks under the Manitoba Ozone Depleting Substances Regulation (103/94).

Staff participated with the United Nations Environment Programme (UNEP) and MOPIA in an Ozone Layer Protection Study Tour to foster ozone awareness and understanding of Manitoba's ODS management program for delegates from Bahrain, Uruguay and Burkina Faso.

Environmentally Sustainable Practices

The Branch promotes environmentally-sustainable practices. Co-operative approaches and partnerships with stakeholder organisations are pursued.

Water Efficiency

With technical and funding assistance from the SDIF, the RM of St. Andrews initiated a project to measure water use by households that draw water from wells. Participants in the project will receive a $150 rebate on a dual flush Caroma toilet and free showerheads. Both overall water use and water use (by way of data logging) for each individual use (toilet, shower, washing machine, etc.) will be measured. The project is expected to provide information on water use in households near Winnipeg that use wells and septic fields. This data will enable municipalities and provincial agencies to give better advice to residents on sizing of septic fields and the best ways to reduce water use. The project received $52,600 in funding from the SDIF.

Staff assisted Pembina Trails School Division with a project to install various retrofit devices to conserve water and electricity in three schools. The project has already saved approximately 1.5 million imperial gallons of water. Funding support of $24,805 was provided through the SDIF.

Staff participated on the Legislation Committee of the Water Strategy. The committee completed a draft document that makes recommendations on restructuring a majority of provincial legislation that involves water. These recommendations include provisions for the promotion of water efficiency.

The Branch, in partnership with the American Water Works Association, held a Water Efficiency Workshop in February. Water efficiency in buildings and municipalities was targeted. This successful workshop attracted about 50 consultants, water plant operators, and government employees.

Booklets outlining water efficiency actions for municipalities, water plant operators, hospitals, schools, and others were printed and posted on the Association of Manitoba Municipalities' (AMM) website. These booklets have been made available at municipal and water related events. The initiative was the result of a partnership between Manitoba Conservation and AMM.

As part of the Winkler Aquifer Management Plan Education Initiative Action Group and the Oak Lake Aquifer Management Plan Education Committee, water efficiency and other aquifer-related educational material was developed and distributed to residents. Utility bill inserts, newspaper articles, radio public service announcements, and a poster contest for grade six students raised awareness of water efficiency and aquifer protection.

Toilets are recognized as a major water user. Branch staff assisted Canadian Mortgage and Housing Corporation (CMHC) in assessing the effectiveness of low flow toilets. Dual-flush (three-litre or six-litre flush) toilets and six litre per flush toilets were provided free by manufacturers/suppliers. Seventy were installed across Canada, with 10 installed in Manitoba facilities: two in a seniors' apartment block, three in an office washroom, two in the Gimli Town office, and three in the Gimli High School. The objectives were to test effectiveness in heavy use-areas, and to measure water savings. All the toilets were given average satisfaction ratings ranging from 7.2 to 7.9 out of 10. The dual flush toilets reduced existing water use by about 56 percent in office washroom installations. The study also indicated that dual-flush toilets save approximately 26 percent more water than conventional 6-L toilets. The final report is available from CMHC.

The Millennium Garden, a seniors' gardening and educational project, completed the first full season of operation. The native plant area was established, and the educational and rainwater collection building was erected. Expansion seems likely given the high level of interest by area residents.

To increase awareness and share information on water efficiency, the Branch continues involvement in outreach projects, establishes linkages with drinking-water education organizations, and participates in AMM trade shows, and continues to network with other water professionals across North America.

Sustainable Development Procurement and Act Implementation

As required by ***The Sustainable Development Act,*** government adopted new Sustainable Development Procurement Guidelines to make purchasing practices environmentally sensitive. A Sustainable Development Implementation Committee, co-chaired by the Branch, developed government-wide procurement goals that were adopted by Cabinet. They also oversaw the development of Departments' preparation of Organizational Action Plans to meet these goals.

The goals represent the essence of the Sustainable Development Procurement Guidelines in five areas significant to meeting the challenge. They encompass many sustainability concerns and are a first step to reducing the Government's ecological footprint while enhancing community development. The goals are:

- Education, Training and Awareness
- Pollution Prevention and Human Health Protection
- Reduction of Fossil Fuel Emissions
- Resource Conservation
- Community Economic Development

Implementation began on Conservation's Departmental Action Plan. Staff is developing a green office checklist and office challenge. These will be used to encourage more sustainable practices at Manitoba Conservation offices. Several action plan targets have been met, including increasing the amount of ethanol fuel purchased, increasing the use of recycled paper and remanufactured toner cartridges and including sustainability clauses in contracts and tenders.

Green procurement was identified as a key tool for promoting sustainable development. The Branch assisted in the planning and funding of the 2002 Going Green conference and trade show. This event brought together suppliers and purchasers of 'green' products and services, and showcased corporate greening initiatives, and environmentally friendly products and services.

The Branch participated in government's ongoing implementation of ***The Sustainable Development Act***, participating on committees to develop Financial Management Guidelines, Code of Practice, and the Guidelines Regulation for publicly funded organizations. The Branch prepared information for the section on Consumption in Manitoba's Sustainability Indicators Report.

Funding Programs

The Branch manages funding programs that support innovative solutions to environmental issues. Overall administrative support is provided to the Sustainable Development Innovations Fund (SDIF) and three targeted allocations under the Fund are managed by the branch. These are the SDIF Open Category, the Waste Reduction and Pollution Prevention (WRAPP) Fund and the Environmental Youth Corps (EYC).

A total allocation of $2.96 million was authorized to support the Open category, comprising nine priority program areas, and the targeted broad allocations. The targeted allocations are:

- Environmental Youth Corps (EYC)
- Manitoba Climate Change Action Fund (MCCAF)
- Manitoba Habitat Heritage Corporation Southwest Agro-Woodlot Program
- Orphan Mine Site Rehabilitation Program
- Orphan Mine Site Assessment Program
- Waste Reduction and Pollution Prevention (WRAPP) Fund
- Zebra Mussel Program

The MCCAF is managed by Manitoba Energy, Science and Technology and the Orphan Mines Site Rehabilitation Program is managed by Manitoba Industry, Trade and Mines.

Details on approved projects funded through the SDIF are provided in a separate *Annual Report* on the Fund, tabled in the Legislature.

SDIF Open Category

The SDIF Open Category supports development, implementation and promotion of environmental innovation and sustainable development projects by local governments, industry, community and youth groups, Aboriginal organizations, and First Nation communities.

Proposals submitted for funding consideration are evaluated against the SDIF criteria by provincial staff. The evaluations are compiled and summarized and then submitted for review to an Advisory Committee, which is comprised of representatives from provincial government departments. The Advisory Committee reviews the proposals and the evaluations and makes funding recommendations to the Minister of Conservation. The Minister of Conservation has delegated approval authority for projects receiving funding of $25,000 or less. Projects receiving funding over $25,000 are subject to Treasury Board approval.

Proposed projects under the Open category are to address one or more priority areas and achieve or demonstrate measurable progress toward achieving the Fund's objectives. They must be environmentally and ecologically sound, promote a sustainable approach, have clear environmental benefits, and take into account benefits to the community and the economy. Projects should also demonstrate involvement of youth wherever possible. Open Category Priority Program Areas are:

- Eco-tourism
- Ecosystem Conservation
- Environmental Technology Innovation and Demonstration
- Northern Community Development and Environmental Issues
- Regional Waste Management
- Sustainable Agricultural Practices
- Sustainable Community Development
- Understanding Our Environment
- Water

A total of $1.2 million was authorized to support the SDIF Open category. Staff processed 87 project proposals, of these, 49 projects expended $1.1 million in grant funding. Projects funded include ventures that focus on Aboriginal interests, youth programming, training initiatives and scientific analysis.

Funding allocations for approved projects by priority project areas are as follows:

Table P2.3
SDIF Open Category Funding

SDIF Fund Priority Area (FY 02/03)	# Projects	Amount Expended
Eco-tourism	2	$30,310
Ecosystem Conservation	6	$67,300
Environmental Technology Innovation and Demonstration	3	$74,000
Northern Community Development and Environmental Issues	2	$84,533
Regional Waste Management	2	$23,500
Sustainable Agricultural Practices	6	$307,348
Sustainable Community Development	5	$113,100
Understanding Our Environment	18	$309,880
Water	5	$137,700
Total	**49**	**1,147,671**

WRAPP Fund

The WRAPP Fund is designed to support the enhancement of local and regional waste-reduction programs, through improved collection and material handling systems, organic waste composting, and enhanced institutional waste management systems.

The Fund received $550,000 and expended $549,832 on waste reduction and pollution prevention related projects and program development. Staff processed 50 project proposals requesting $1.3 million in funding. Of these, 32 projects were approved and received $491,700 in grant funding.

Funding allocations for approved projects by priority project areas are as follows:

Table P2.4
WRAPP Fund

WRAPP Fund Priority Area (FY 02/03)	# Projects	Amount
Integrated Waste Management	7	$82,100
Pollution Prevention	4	$47,000
Composting	6	$80,850
Market Development	3	$39,500
Promotion and Education	5	$84,900
Green Procurement	—	—
Regional Recycling	5	$100,350
C & D Waste	1	$12,000
Institutional Waste Reduction	1	$45,000
Total	**23**	**$491,700**

An additional $58,000 was allocated to support WRAPP Program Development in the following areas:

- Water Conservation Promotion and Education
- ***Sustainable Development Act*** Policy Development and Green Procurement Initiatives

- Household Hazardous Waste Management and Electronics Recycling Initiatives
- Northern Waste Management Committee Activities
- Ozone Depleting Substances Regulation Development
- Waste Management Facility Guidelines Development
- WRAPP Program Administration, Project Monitoring and STEP Student Position

Environmental Youth Corps

The Environmental Youth Corps (EYC) has provided Manitoba's young people with an opportunity to prepare for the environmental challenges of tomorrow by helping them gain valuable education and experience today. Youth are encouraged to volunteer within their community in projects that help to improve, protect and rehabilitate Manitoba's environment. The EYC program provides youth with the opportunity to be involved in a variety of environmental activities that may otherwise not occur. The program has demonstrated the government's commitment to increasing the opportunities for young people to be involved in environment-related activities, and to further the commitment of environmental protection and education for youth.

Environmental projects eligible for funding to a maximum of $5,000 include water quality, waste minimization (recycling, composting, etc.), protection of flora and fauna, rehabilitation and conservation of the natural environment, wildlife conservation and habitat preservation. A total of 105 proposals were processed, of which 75 projects, involving more than 5,000 youths, were granted $185,617.

Table P2.5
EYC Summary

Total Allocation for 2002/2003	**$200,000**
Applications Processed	105
Applications Approved	75
Applications Deferred	6
Applications Declined	22
Applications Withdrawn	2
Number of Youth Involved	5,001
Total Amount for Grants Approved	$186,152
Total Amount for Grants Expended	$185,617
Program Operating and Administration Costs	$ 14,383
Total Amount Expended	**$200,000**

Table P2.6
12.4(j) Pollution Prevention

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	568.1	10.00	614.5	(46.4)	
Total Other Expenditures	71.9		76.8	(4.9)	

Lands

The Branch is responsible for the management and control of provincial Crown lands that that are governed by ***The Crown Lands Act***. The branch also has responsibility for wild rice under ***The Wild Rice Act***.

Lands Branch works closely with Regional Operations and other Program branches of the department to review applications and other proposals or programs involving Crown land and wild rice. The reviews also involve other departments and agencies of the provincial, federal and municipal governments as well as First Nations and external organizations, depending on the type of application and location of the Crown land.

The Branch administers the Grants in Lieu of taxes program for the department. In addition, it also provides support services to other branches in the drafting of Orders in Council, agreements, and Cabinet submissions.

The objectives of the branch are:

- To incorporate the principles of sustainable development into its processes and activities.
- To develop policies and processes that are transparent to the public and provide fair and equal opportunities to all Manitobans in allocations of Crown land;
- To ensure the Province receives full value for the disposition of Crown land through sale or rental.
- To facilitate delivery of the Northern Flood Agreement, Treaty Land Entitlement, and other First Nations land settlements and programs.
- To maintain complete and accurate records of Crown land inventories, encumbrances and dispositions;
- To provide a high level of service to government and the public.

Crown Lands Operations

The section is responsible for ensuring due diligence is carried out in reviews and recommendations relative to applications for the use or occupation of Crown land.

Applications are received for a broad range of private, public and commercial uses. Each application must be assessed with respect to appropriate type of tenure for the proposed use or occupation and compliance with sustainable development principles, policies and legislation.

Types of tenure include permits, leases, licences of occupation, easements and fee simple title (sales). The review and approval process, terms and conditions, and time frames are different for each type of tenure. For example, a sale application usually requires a much more comprehensive process which is significantly more lengthy than that required for a permit application.

The review process for all applications includes circulation of the application throughout government as well as to municipal authorities, planning districts, conservation districts and First Nations. The recipients of the circulation are determined based on the type of application, proposed land use and location of the Crown land.

The section is responsible for the preparation of various legal documents related to an approved disposition. These include Sale, Lease, Licence of Occupation and easement agreements, Land Grants, Land Transfers, Real Property Applications, Caveats, Assignments, Collateral Assignments. Accuracy is essential due to the high consequence of error.

In 2002/2003 the section completed 120 sales and 21 easements. It currently administers 2922 permits and 546 leases, 6 Licences of Occupation and 1,053 Easements.

Operations section is also responsible for administration of wild rice licences and permits on Crown land under ***The Wild Rice Act***. A Development Licence may be issued for a three year period for test seeding and development prior to converting to a Production Licence.

The section currently administers 81 Development Licences, 184 Production Licences and 12 Block Licences.

Aboriginal Land Programs

The unit is responsible for administration of Crown land programs and settlement agreements involving First Nations and aboriginal communities. It represents the Branch and serves a key role in the negotiation and implementation of various agreements and programs involving Crown land. The section enjoys close and cooperative working relationships with First Nations and provides information, explanations and assistance to facilitate selections of Crown land and resolution of issues associated with selections. The section represents the Branch in the consultation process with First Nations and Aboriginal communities for Crown land proposals.

Crown land related technical support and advisory services are provided to other branches and departments that are responsible for negotiation and delivery of agreements, claims and programs involving First Nations. Services include research, mapping, record keeping, technical advice and services related to the agreements and any interests, encumbrances or legislative limitations that may affect availability of selected Crown lands.

The primary responsibility of the section is the clearance and transfer of Crown land to Canada for entitlement First Nations under the *Treaty Land Entitlement Framework Agreement*. A custom-designed computer GIS system known as TRELES was developed to manage the program. The system tracks and maps selections and acreages, records circulation responses, tracks and reports on issues associated with selections and resolutions to the issues, and generates status reports on demand. The section works closely with Aboriginal and Northern Affairs who has the lead responsibility in delivery of the program.

To date the Section has reviewed in excess of one million acres of Crown land selections. To ensure consistency with the various settlement agreements, provincial departments and agencies have reviewed the sites. The section has formulated a Provincial Position on each site and held discussions with Canada and the First Nations to resolve the conditions under which the lands would be available for transfer.

The section participates in an all party committee to develop agreed forms for the transfer of lands between Canada and Manitoba and works with other branches and regions within the department to develop methods and procedures for the delivery of programs to ensure compliance with the terms of the Framework Agreement. It currently provides technical support to the Pequis First Nation Land Claim negotiations.

Other programs and agreements the sections is involved in or responsible for include The Northern Flood Agreement, land exchanges, and other land claims or treaty land entitlements.

Table LA.1
Treaty Land Entitlement Status

1997 TLE Framework Agreement First Nations	Crown Land Entitlement Acres	Crown Land Acres Selected	Purchase Land Entitlement Acres	Purchase Land Acres Requested
Barren Lands	66,420	16,961.94		
Northlands	94,084	103,950.43		
Brokenhead	4,344	4,738.05	10,137	
Buffalo Point	3,432	2,867.09	607	
Fox Lake	26,391	100.02		
Gods Lake	42,600	46,528.23		
Gods River	8,725	9,963.49		
Mathias Colomb	234,371	199,514.46		
Nisichawayasihk	79,435	70,274.83		
Norway House	104,784	107,266.95		
Opaskwayak	47,658	51,558.98	8,410	
Oxford House	35,434	38,602.71		
Rolling River	2,356	2,352.65	44,756	4,427.21
Sapotaweyak	108,134	112,620.62	36,045	
Wuskwi Sipihk	44,168	45,942.24	14,722	960.00
1997 TLE Framework Agreement First Nations	**Crown Land Entitlement Acres**	**Crown Land Acres Selected**	**Purchase Land Entitlement Acres**	**Purchase Land Acres Requested**
Sayisi Dene	22,372	0.00		
Shamattawa	24,912	19,350.05		
War Lake	7,156	7,621.51		
York Factory	29,173	10,806.13		
TOTAL	985,949	851,020.58	114,677	5,387.21

1994 TLE Settlement Agreement First Nations	Crown Land Entitlement Acres	Crown Land Acres Selected (Approx.)	Acres Transferred to Canada
Garden Hill*	45,369.00	52,000.00	39,206.00
Red Sucker Lake	9,487.00	16,650.00	9,585.37
St. Theresa Point*	34,908.00	35,250.00	35,185.80
Wasagamack*	12,493.00	13,300.00	12,511.30
TOTAL	102,257.00	117,200.00	96,488.47

*Includes additional acres necessary to accommodate future public purpose requirement

Number of Sites Approved for Survey

Buffalo Point First Nation (5)	2161.50 acres±
God's Lake First Nation (7)	8,794.41 acres±
Nisichawayasihk Cree Nation (7)	22,639.74 acres±
Norway House Cree Nation (1)	24,358.35 acres±
Opaskwayak Cree Nation (3)	10,413.80 acres±
Rolling River First Nation (7)	2,352.65 acres±
Sapotaweyak Cree Nation (4)	93,5156.55 acres±
Wuskwi Sipihk Cree Nation (4)	20,517.10 acres±
Total:	184,754.10 acres±

Table LA.2

12.4(k)1 Crown Lands Operations

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	726.5	18.00	814.3	(87.8)	
Total Other Expenditures	1,321.3		1,306.3	15.0	

Crown Lands Registry

This section maintains secure and accurate records of current and historic dispositions of Crown land. Records of dispositions and all related documents are maintained in the computerized Crown Land Registry System. The Records Vault holds microfiche and paper files containing copies of agreements, documents, correspondence and other information related to each specific parcel of land.

The Registry is the authoritative source of original grants of land and mineral interests from the Crown. This includes dispositions made by the Dominion Government prior to the transfer of natural resources to the province in 1930.

The section provides a number of services to a wide range of government departments, the public and private agencies. These services include:

- Providing computerized queries, reports and historical searches of Crown land records.
- Producing invoices, statements and permits for Lands Branch, Parks and Natural Areas Branch, and Aboriginal and Northern Affairs.
- Providing information to the public and private sector regarding mines and minerals ownership.
- Administering the approval process for requests by municipalities for approval to sell government road allowances.
- Administering approval process for transfer of Mines and Minerals for subdivision purposes.
- Recording all transactions and maintaining records related to Crown land dispositions, reservations and Order In Council designations.
- Recording agricultural permits and leases, and quarry permits and leases on the Crown Land Registry System.
- Managing microfilming and archiving requirements for Crown land records.
- Maintaining records of Crown lands reserved for purposes of fulfilling obligations under the Treaty Land Entitlement Agreement, Northern Flood Agreement, and other First Nations land claims.
- Providing online access to the Registry to other branches and departments of government.
- Maintaining the branch web site.
- Providing a wide range of management and work flow reports.
- Providing GIS services for the Treaty Land Entitlement program and for other sections.

The section is currently in the final stages of integrating the Licencing Advisory Committee database into the Registry system to provide one stop shopping for tourism lodge and outfitting operations.

The integration of geographic information technologies into the Crown Land Registry System (CLRS) is in progress. This involves development of a module to be added to the Registry application that will provide seamless real time updates between CLRS and GIS.

In 2002/2003 an additional 20% of Crown land records have been converted to digital maps that show actual sizes and locations on a base map of the province.

Table LA.3
12.4(k)2 Crown Lands Registry

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employees Benefits	182.7	6.00	237.9	(55.2)	
Total Other Expenditures	154.2		161.3	(7.1)	

Remote Sensing

The Manitoba Remote Sensing Centre (MRSC) processed NOAA/AVHRR satellite data for Canadian World Crop Monitoring Program, Canadian Global Change Program, and Parks Canada, covering all of Canada, using GEOCOMP satellite image processing. Cloud-free image composites were created every 10 days between 11 April and end of October.

The MRSC was contracted to update the 1994 Land Use/Land Cover of Agro-Manitoba to 2000/2001 using LANDSAT satellite imagery. This project is approximately one- third complete and is planned for completion in 2003/04.

Flash floods in June 2002 occurred in southeast Manitoba. At the request of the Water Branch, the MRSC provided a flood boundary extent using LANDSAT and RADARSAT. The information generated from the satellite data will be used for assisting in resolving flood damage claims and future flood mitigation.

As part of a national initiative being funded by the Canadian Space Agency, the MRSC was contracted by Ducks Unlimited Canada to assist in the development of a National Wetland Inventory for Manitoba- Phase 1. Phase 1 commenced in January 2003, to develop and validate an operational wetland Inventory methodology using Radarsat-1 and Landsat TM Imagery.

The MRSC was requested by Manitoba Conservation-Forestry Branch to provide an update of forest land cover using remote sensing for FMU's 10 and 11.

Topographic Mapping

Digital topographic mapping compilation at 1:5000 was generated for the Cross Lake First Nation related to Article 3, of the Northern Flood Agreement. Approximately 50% of the compilation was completed.

Digital Topographic data continued to be generated for the Forest Inventory Branch for the Forest Management Units; 10 and 11, utilizing the 1:60,000 scale aerial photography were completed.

File Management and topological structuring of forest management unit's 20,23,30,31 and 35 to include the trees and marsh topology was completed and the geo-spatial information will be added to the MLI.

Ten new drain designation maps were completed (for a total of 72 to date) for the Water Branch geographic information system. Through enhancement of the digital topographic data, drains are designated by their degree of contribution to the overall stream flow, as well as the installation of culverts to assure continuous flow of water within the digital elevation model being developed for Water Resources Branch.

Negotiations with Natural Resources Canada for the integration of the 1:50,000 National Topographic Series mapping program with the Provincial product to expedite the process of base mapping in northern Manitoba commenced. Manitoba is intending to develop a work plan in conjunction with provincial stakeholders to provide a base map compilation for the north.

Geographical Names

Coordinated and approved the naming of a series of six lakes named in honour of Her Majesty Queen Elizabeth's six grandchildren in recognition of her visit to Manitoba in her Jubilee year.

Participated in a names study within the Rural Municipality of Ritchot where they established new community boundaries for 'unincorporated entices'. The issues of concern addressed included e-911, civic addressing, Canada Post, MTS, Elections Canada, Statistics Canada, local mapping updates and highway signage.

Continued to participate with federal and provincial counter parts in the development of a national prototype for Canadian Geographical Names Service (CGNS).

Produced and distributed toponymic data in a digital format (.shp .dbf, etc.) as requested. Hard copy data in the form of tabular printed data or map data (i.e. Provincial Map showing features named after Manitoba War Fatal Casualties from different communities) were also produced.

Continued to officially record all new local drain names in southern Manitoba. This project upgrades Manitoba's digital maps and a new database that encompasses all drain information including geographic coordinates and includes unique key for cross-reference purposes to the Manitoba Geographical Names Database. The project is ongoing as Manitoba's digital maps are updated. Field research will be required in the future to confirm local names for currently unnamed drains.

Coordinated the translation and desk-topping of the publication, "Noms géographiques du Manitoba", was completed and it is scheduled for printing during March, 2003;

Coordinated the translation and desk-topping of the new publication, "A Place of Honour - Manitoba's War Dead" commemorated in its Geography. It encompasses 500 pages of photos, biographical sketches, letters, and stories about lost loved ones after whom geographical features have been named. It is also scheduled for printing during March, 2003;

Table LA.4
12.4(k)3 Remote Sensing

Expenditures by Sub-appropriation	**Actual 2002/03 $**	**Estimate 2002/03 FTE**	**Estimate 2002/03 $**	**Variance Over/(Under)**	**Expl. No.**
Total Salaries and Employees Benefits	566.0	11.00	551.3	14.7	
Total Other Expenditures	240.0		239.0	1.0	
Total Recoveries	(1.5)		(23.7)	22.2	

Land Mapping Services

The primary function of this section is to develop and maintain province wide digital (cadastral) property parcel data. The developed digital land parcel data forms a fundamental component of a province-wide, multi-purpose information system. Its purpose is to provide provincial land data users with a means of spatially referencing their own land data records such as infrastructure, assessment, ownership, land use, etc., to a common, geo-referenced, land parcel base that is timely, precise and homogeneous.

Developed digital land parcel data for 10 communities, 7 full townships, 2 parishes, and 1 rural municipality. This mapping was carried out for the following agencies: Forestry branch (Dutch Elm Disease Program), Water Branch, Crown Lands Branch, Department of Inter-governmental Affairs and Manitoba Hydro.

Special Projects:

- Created digital Duck Mountains Forest Reserve Boundary for Forestry Branch.
- Created digital Porcupine Mountains Forest Reserve Boundary for Forestry Branch.
- Completed digital provincial boundary file for the MLI.
- Completed initial draft of Property Mapping Standards of Cadastral Mapping section - Geomatics Services and Remote Sensing. Posted same on Branch Internet site.
- Provided copies of all new cadastral datasets to the MLI in both AutoCAD DXF and ArcInfo shape file formats. Updated all cadastral datasets to 2002 status.
- Upgraded CEDIT software to provide improved cadastral coordination technology to the section.
- Initiated construction of a digital cadastral index map displaying completed, current, and projected cadastral map datasets for inclusion on the MLI and Branch websites.
- Provided copies of all cadastral datasets in the City of Winnipeg exurban area to Intergovernmental Affairs for utilization in Capital Region GIS project.
- Provided copies of all cadastral datasets in the City of Winnipeg exurban area to a new client - City of Winnipeg Spray and Insect Control Group to be used as a backdrop for identifying spray program areas.

Table LA.5
12-4(k)4 Land Mapping Services

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	471.1	8.00	459.9	11.2	
Total Other Expenditures	72.7		73.1	(.4)	

Habitat Enhancement Fund

The Fund provided a grant to Manitoba Habitat Heritage Corporation, Critical Wildlife Habitat Program component, to support stewardship initiatives, resource inventories, land management (including native prairie management), and extension initiatives.

Table HE.1

12-4(m) Habitat Enhancement Fund

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Other Expenditures	50.0		50.0	0.0	

Special Conservation and Endangered Species Fund

The Fund promotes principles of sustainable development through grants to non-profit community based organizations to undertake projects that will enhance the natural resources of the province. The Fund encourages organizations to develop local projects that foster better understanding of natural resource issues and the environment. Funding is granted according to dollars in the Fund and the number of proponents. In 2002, the Department supported 13 projects.

Table HE.1

12-4(h) Special Conservation and Endangered Species Fund

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Grant Assistance	315.3		432.1	(116.8)	

Environmental Stewardship

Divisional Administration

Divisional administration provides direction for and facilitates development of legislation, policies, plans and programs to sustainably manage resources and the environment.

Divisional responsibilities include:

- Coordinating and integrating natural resource policy, legislation, environmental impact assessments, co-management agreements, land-use planning and resource allocation.
- Promoting and facilitating effective involvement of aboriginal people in management of natural resources and the environment.
- Managing the environmental approvals process to ensure sustainability of developments.
- Undertaking reviews to improve the efficiency and effectiveness of programming.
- Providing financial support to the Canadian Council of Ministers of the Environment and the Manitoba Eco-Network.
- Ensuring that effective relations are maintained with other governments.
- Negotiating resource co-management agreements.

Environmental Stewardship Division comprises:

- Sustainable Resource Management Branch
- Environmental Assessment and Licensing Branch
- Aboriginal Relations Branch

Table ES.1

12.5(a) Divisional Administration

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	147.7	2.00	143.7	4.0	
Other Expenditures	75.1		165.1	(90.0)	
Northern Initiatives	25.0		400.0	(375.0)	
Grant Assistance	110.9		110.9	0.0	
Total Other Expenditures	211.0		676.0	(465.0)	

Sustainable Resource Management

The Branch co-ordinates and integrates departmental policy, natural resource allocation and Crown land use planning, environmental impact assessment, legislative interpretation, and co-management, in accordance with principles and guidelines of sustainable development. The Branch is responsible for the administration of ***The Sustainable Development Act.*** The Branch also monitors cross-boundary water projects, provides planning and policy assistance to local planning authorities, administers licensing of resource-based tourism facilities, represents the department in issues related to internal and international trade agreements, provides support on communications issues, co-ordinates preparation of ministerial correspondence and co-ordinates departmental settlements and litigation arising out of hydro-electric and water-control projects and Treaty Land Entitlement.

The Branch provided strategic planning, analytic, economic and evaluative services to assist management to improve the effectiveness of departmental programming, Crown land-use planning and resource allocation. This included:

- managing the department's assessment of development proposals under ***The Environment Act*** and the ***Dangerous Goods Handling and Transportation Act*** and submitted by other agencies and businesses and pre-screening proposals from Manitoba Transportation and Government Services;
- integrating conservation policies and programs with other departments, including inter-departmental and inter-governmental committee participation;
- assisting in the planning of land and resources by municipalities and planning districts;
- assisting review of *Annual Operating Plans* of forest management licensees, and forest renewal strategies;
- reviewing applications for funding under Sustainable Development Innovations Fund, the Special Conservation and Endangered Species Fund, and Fisheries Enhancement Initiative Fund;
- co-ordinating licensing of resource-based tourism facilities and services, such as hunting and fishing lodges, outfitters, and ecotourism; and
- co-ordinating negotiations with forestry companies to increase opportunities for sustainable use of forest resources.

Integrated Directors Group Review Process

The Branch is secretariat to the Integrated Directors Group, which establishes procedures for integrating management of natural resources and the environment, consistent with the principles of sustainable development. This process co-ordinates, for example, the review and development of departmental positions on resource management issues, including Environment Act proposals, municipal development plan amendments, Crown oil and natural gas lease sales, highways proposals, applications for the Special Conservation Fund, and applications to the Licensing Advisory Committee.

Legislation and Inter-governmental Affairs

The Branch ensures conservation legislation and regulations are appropriate and up-to-date and that beneficial working relationships are established and maintained with other Canadian jurisdictions.

The Branch provides co-ordination for headquarters operations, regions, other branches, departments, and agencies on new and amending legislation, both provincial and federal, and on litigation. An advisory service on interpretation and application is provided to the department and the public.

Legislation and regulations are developed, reviewed and amended, the department is represented on Federal/Provincial committees and task forces, and agreements are negotiated to ensure consistent and effective environmental management.

The Branch liases with legal counsel in Manitoba Justice and provides internal consulting service on legislative, public consultation, intergovernmental and other issues.

Legislation

Manitoba Conservation has administrative responsibility for forty-two statutes. The following legislative activity occurred during the reporting period:

- Amendments to ***The Water Resources Administration Act*** were proclaimed in force April 17, 2002. These provisions relate to the administration and enforcement of flood proofing criteria to which all new and reconstructed buildings, structures and erections within a designated flood area must comply.
- Amendments to ***The Environment Act*** received Royal Assent on May 23, 2002 and became effective on that date. These provisions relate to measures that may be taken regarding health emergencies caused by disease transmitting mosquitoes.
- ***The Polar Bear Protection Act*** received Royal Assent on August 1, 2002 and was proclaimed in force January 1, 2003. This legislation prohibits any person from possessing or exporting a polar bear unless a permit has been obtained from the Minister. It allows regulations to be made respecting instances when a polar bear may be placed in captivity and standards for the care and treatment of polar bears in captivity.
- ***The Security Management Act*** received Royal Assent on August 9, 2002 and became effective on that date. Part 1 of the Act amends ***The Dangerous Goods Handling and Transportation Act*** to address potential terrorist threats.
- ***The Drinking Water Safety Act*** received Royal Assent on August 9, 2002. This legislation establishes the Office of Drinking Water and sets out a legislative scheme to provide for the improved protection of drinking water.
- ***The Resource Tourism Operators Act*** received Royal Assent on August 9, 2002. This Bill governs the provision of outfitting services in Manitoba. This legislation requires all outfitters to be licensed and obtain permits to use or operate outfitting facilities. When proclaimed, it will replace ***The Tourism and Operators Act***.
- In September 2001, the department released a discussion paper on amendments to ***The Environment Act*** to implement previous Consultation on Sustainable Development Implementation (COSDI) recommendations that are within the Act's purview. Multi-stakeholder consultations on those amendments began in October 2001 and were completed in March 2002. A report summarizing consultation results and recommendations was received in April 2002. The government is currently considering appropriate legislative responses to the report's recommendations.

The Branch also chaired and participated on the interdepartmental Water Legislation Task Team established to prepare a discussion paper on new water legislation to implement 'The Manitoba Water Strategy'. A draft discussion paper was prepared which outlined the framework for new integrated and comprehensive water legislation which legislated water planning, consolidated a number of water Acts and addressed weaknesses and gaps in existing legislation.

Intergovernmental Affairs

The following activities occurred during the reporting period:

- supported the Minister and Deputy Minister in their official activities representing Manitoba in the Canadian Council of Ministers of the Environment forum (CCME);
- worked co-operatively with the CCME Secretariat and other Canadian jurisdictions to co- ordinate and advance environmental management issues across Canada;
- monitored trade and environment issues, including the Canada/United States softwood lumber trade dispute;
- supported the Minister as member of the Governmental Committee for Canada's representation on the North American Commission for Environmental Co-operation;
- was Manitoba's representative on the following intergovernmental committees:
  - North American Agreement on Environmental Co-operation (Canada Implementation Working Committee and Canada Implementation Senior Officials Committee),
  - Canada-Costa Rica Agreement on Environmental Cooperation,
  - Canadian Council of Ministers of Environment Committees,
  - CCME Environmental Protection and Planning Committee;

- supported the government's climate change activities;
- co-ordinated follow-up activities to the World Summit on Sustainable Development;
- co-ordinated Conservation's responsibilities under the OECD Environmental Performance Review for Canada; and
- participated in sustainability indicators project under Canada/South Africa Twinning Program.

The Branch represented the department in trade matters related to the *Agreement on Internal Trade*, *NAFTA* and *GATT/WTO* agreements. Activities included representing the department in development and implementation of the *Processing of Natural Resources* chapter of the ***Agreement on Internal Trade***, co-ordinating activities associated with implementation of *NAFTA*, monitoring trade developments in resource issues, and conducting liaison with other departments and jurisdictions on trade matters involving resources.

Co-Management

The Branch develops policy, procedures and guidelines for co-management of natural resources with First Nations communities and organizations, facilitates negotiation and leadership of boards and committees and integrates departmental participation in agreements. Activities undertaken were:

- co-ordinated consultation with First Nations and northern communities on resource allocations for lodges and outfitters;
- sat on the Norway House Resource Management Board for integrated land and resource use in their Resource Management Area;
- reviewed Northern Flood Agreement resource management agreements and co-ordinated departmental input and requirements;
- participated in co-management discussions with Opaskwayak Cree Nation, the West Region Tribal Council and the Manitoba Metis Federation; and
- acted as liaison with other provinces and territories.

Treaty Land Entitlement

The Branch formulates the department's position on Treaty Land Entitlement issues. Policies are developed about the availability of Crown land for Treaty Land Entitlement settlements.

Hydro-Electric and Water-Control Project Settlements

The Branch co-ordinates departmental input into settlements arising out of the *Northern Flood Agreement*, outstanding matters relating to the *Grand Rapids Forebay Project*, Fairford River control structure and other claims by First Nations resulting from hydro-electric or water-control projects. Negotiations with Cross Lake First Nation regarding the *Northern Flood Agreement* are progressing.

Transboundary Water Projects

The Branch monitors development of international and inter-provincial water projects to protect Manitoba's interests and ensure the protection of quality and quantity of water flowing into Manitoba.

The Transboundary Waters Office represents Manitoba interests relating to waters crossing the International Boundary. The Office has established a working relationship with Canadian, American and international agencies and officials. It represents Manitoba on the United States-Canada Consultative Group on Garrison, co-ordinates interdepartmental input and analysis of proposals related to the Garrison Diversion Unit and Devils Lake, liases with the International Joint Commission, monitors activities of IJC Boards and co-ordinates Manitoba responses. The Office works closely with Foreign Affairs and Environment Canada in developing and presenting Canadian positions to United States.

Licensing Advisory Committee

The Branch provides secretariat and Chair for the Licensing Advisory Committee (LAC). The Committee, which comprises the Branch, Regional Operations and Environmental Management Divisions, Manitoba Culture, Heritage and Tourism, and Manitoba Aboriginal and Northern Affairs, makes recommendations to the Minister on licensing resource-based tourism facilities, which include hunting, fishing and ecotourism lodges, outcamps and outfitter services. About 1,200 licences are issued annually.

The Branch serves as secretariat to the LAC Appeals Committee, which provides an appeal mechanism for operators wishing to appeal an LAC decision.

Sustainable Development Implementation

The Branch administers ***The Sustainable Development Act*** and co-ordinates implementation of the Act within the department and supports and assists in the implementation of Act interdepartmentally, by Crown corporations, universities, colleges, school divisions, regional health authorities and local government.

The Branch:

- is a member of and provided secretariat support to the interdepartmental Steering Committee established to oversee implementation of the Act;
- is the co-chair or member of four interdepartmental working groups established to:
  - recommend ways and means for implementing the sustainable development code of practice,
  - refine the sustainability indicators and prepare the Provincial Sustainability Report,
  - prepare the procurement and financial management guidelines regulation, and
  - recommend strategies and actions to provide the needed staff education, training and information respecting the implementation of the various components to the Act;
- is a member of the departmental procurement implementation committee established to prepare and oversee implementation of Manitoba Conservation's sustainable development procurement action plan;
- provided information and made presentations to a number of departments, agencies and organizations on the requirements of the Act and process for and progress made at implementation.

During the reporting period:

- all working groups developed work plans to address assigned tasks;
- draft departmental annual report guidelines were prepared to guide reporting of progress made at integrating sustainable development in the operations on government departments;
- a draft procurement and financial management guidelines regulation was prepared;
- development of a draft Provincial Sustainability Report was initiated; and
- Manitoba Conservation's procurement action plan was prepared and adopted.

Manitoba Round Table for Sustainable Development

The Branch provided administrative and research services and support to the Manitoba Round Table for Sustainable Development which is formally established under ***The Sustainable Development Act***. The Manitoba Round Table comprising 26 members, including six cabinet ministers, with Minister of Conservation as Chairperson, met three times.

Round Table priority areas and activities included:

- Sustainability Indicators;
- Sustainable Development Education Strategy;
- Manitoba Youth Round Table;
- Sustainable Development Scholarship Program; and
- the Awards of Excellence Program.

The Branch prepared the *Manitoba Round Table Annual Report* and co-ordinated the Round Table's Awards of Excellence Banquet which took place in November 2002 and was attended by some 400 people.

Land Use Planning

The Branch co-ordinates three principal land use planning initiatives, broad area planning, Crown land planning and departmental input into local municipal planning. Additionally, the Branch is the departmental lead in the regular review of the province's land use policies.

East Side Lake Winnipeg Broad Area Planning Initiative

The Consultation on Sustainable Development Implementation (COSDI) Report (1999) recommended that the implementation of sustainable development include the creation of broad area plans across the province. Broad area planning is defined as integrated and co-ordinated planning that is based on the sustainability of the ecosystem. Broad area plans are intended to ensure that future land, resource and development decisions address environmental, social, health, cultural and economic needs of the public, local communities, First Nations and various stakeholders and interest groups.

The COSDI Report also recommended an inclusive public process and guidelines for meaningful consultation with First Nations and Aboriginal communities towards the development of a province-wide protocol on land and resource decision-making. As a pilot project for broad area planning across the province, the East Side Lake Winnipeg Broad Area Planning Initiative was announced.

The Branch co-ordinates the East Side Planning Initiative and provides secretariat support to the East Side Round Table, commissioned by the Minister to develop a work plan, conduct public meetings and bring forward recommendations toward a sustainable land use plan for the study area. The Branch also provides secretariat support to the Round Table's two principal advisory bodies, the East Side First Nation Council and the East Side Advisory Committee.

During the year:

- cabinet approved the establishment of the East Side Lake Winnipeg Round Table (July 24, 2002);
- the Minister approved the Round Table Terms of Reference (October 21, 2002);
- the Round Table, the First Nation Council and the Advisory Committee held meetings;
- a Community Liaison Co-ordinator was hired to work with First Nation and Northern Affairs communities; and
- a public meeting schedule was developed.

Crown land planning

The Branch provides planning and secretariat support to the Crown Land Classification Committee. The Branch, in conjunction with regional Bloc Planning Committees, maintains and administers the system of operational coding on Crown land, and prepares *Provincial Crown Land Plans*. The Branch also administers the Committee's system for the review and determination on disposition (sale, exchange, designation by Order-in-Council) of Crown lands, and formulates and maintains the committee's policy and procedure manual.

During the year, the Committee:

- considered the proposed expansion of the Pinawa Dam and Rivers Provincial Parks, and the proposed establishment of the Criddle Vane Provincial Park;
- reviewed 54 agricultural Crown land sale applications, 18 agricultural Crown land sale appeals, one Crown land exchange and 2 non-agricultural Crown land sale applications;
- approved of about 310 operational Crown land code changes and created a digital database to manage and maintain an inventory code of changes;
- undertook the review and revision of the chapters 1 – 8 of its policy and procedures manual; and

- considered a number of policy or land management issues such as: aspen encroachment, procedures for closing roads and trails on Crown land, PFRA's Green Cover Program, protection of riparian areas, sale of surplus floodway and diversion Crown lands, and a policy / procedure to address treaty and Aboriginal rights when considering Crown land sale applications.

Municipal land planning

The Branch assists municipalities and Planning Districts in the preparation of development plans and zoning by-laws by co-ordinating preparation of departmental advice and information on planning, management and use of natural resources (wildlife, fish, surface and ground water, forests, outdoor recreation, ecological significant areas, parks, natural areas and Crown lands) and responding to requests for studies, maps, and statistical compilations required to properly allocate resources.

The Branch also co-ordinates development of departmental positions and advice on proposed new and amended *Development Plans* and *Zoning By-laws*.

Provincial Land Use Policies

The Branch continued coordination of the review and proposed revision of those provincial land use policies for which Manitoba Conservation is the lead department. The approach is to revise the policies to reflect the recommendations of the COSDI report, integrate approved sustainable development land use related policies and integrate the principles of the provincial sustainable development code of practice and Sustainable Development Act.

Table SR.1
12.5(b) Sustainable Resource Management

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	998.4	18.00	1,096.4	(98.0)	
Other Expenditures	976.4		1,011.8	(35.4)	
Grant Assistance	20.2		10.2	10.0	
Total Other Expenditures	996.6		1,022.0	(25.4)	

Environmental Assessment and Licensing

To ensure that development maintains sustainable environmental quality, the Branch:

- Administers development approval requirements of ***The Environment Act***, ***The Dangerous Goods Handling and Transportation Act***, ***The Public Health Act*** and ***The Pesticides Regulation***,
- Controls municipal, industrial, and hazardous waste sources of pollutants,
- Minimizes environmental impact of development proposals, and
- Minimizes adverse effects to the environment and public health from pesticide use.

Municipal, Industrial, and Hazardous Waste Approvals

To control municipal, industrial and hazardous waste sources of pollutants, the Section:

- Co-ordinates environmental assessment and licensing of proposed Developments,
- Recommends conditions to the Director and Minister for *Development Licences*,
- Advises on technical aspects of pollutant treatment, control strategies, and hazardous waste,
- Reviews minesite rehabilitation schemes,
- Provides technical assistance to municipal, provincial, and federal governments on wastewater collection, treatment and disposal, air emission control, and management of hazardous wastes,
- Provides technical support to other Departments,
- Conducts inspection and enforcement activity for developments in planning, construction, and operating stages,
- Responds to complaints and inquiries, and
- Represents the Department at public meetings or hearings.

Environmental Land Use Approvals

To ensure that potential environmental impacts are identified and addressed in projects which affect land and water use, the Section:

- Co-ordinates environmental assessment and licensing of proposed developments in recreation, transportation, transmission, pipelines, hydro-electric generation, forest management, and water development and control,
- Co-ordinates environmental review of proposed Treaty Land Entitlements,
- Co-ordinates environmental review of Canada/Manitoba Infrastructure Works projects,
- Assists developing and revising legislation, policies and procedures,
- Participates in and provides technical advice for projects and program planning, including screening of Manitoba Transportation and Government Services projects,
- Participates on interdepartmental committees and task forces, and review and approval by letter, of projects with environmental impacts not included in *Classes of Development Regulation*,
- Participates on Tembec, Tolko Manitoba and Louisiana-Pacific forest management stakeholder advisory committees,
- Provides management services for such other initiatives as Manitoba Model Forest and Manitoba Forestry Association,
- Conducts inspection and enforcement for developments in planning, construction, and operating stages,
- Responds to complaints and inquiries, and
- Represents the Department at hearings and public meetings.

Pesticide Approvals Section

To minimize adverse effects to health and the environment from pesticides and fertilizers, the Section:

- Provides professional expertise to the Department, government, public, and industry on pesticide/fertilizer use, storage, disposal, and control,
- Manages a *Pesticide Permit* system to address public concerns/objections,
- Recommends conditions to the Director and Minister for ***Environment Act*** *Licences*,
- Assists in periodic revision of *National Standard for Pesticide Education, Training, and Certification in Canada* for pesticide applicators and vendors,

- Provides technical expertise and advice to the Association for a Clean Rural Environment on container disposal and other environmental concerns,
- Supplies expertise to the Federal, Provincial, Territorial Committee on Pest Management and Pesticides through annual national meetings and telephone conferences,
- Serves on the Board of Directors and provides information to the Prairie Provinces Certified Crop Advisor program,
- Serves on the Board of Directors and provides advice to the Industrial Vegetation Management Association,
- Conducts inspection and enforcement activity for developments in planning, construction, and operating stages, and
- Responds to complaints and inquiries respecting pesticide/fertilizer use.

Table EA.1

Environmental Approvals Activities

(ELUA - Environmental Land Use Approvals; PA - Pesticide Approvals; MIHWA - Municipal, Industrial, and Hazardous Waste Approvals)

Activities	**ELUA (#)**		**PA (#)**		**MIHWA (#)**		**Total**	
	02-03	**01-02**	**02-03**	**01-02**	**02-03**	**01-02**	**02-03**	**01-02**
The Environment Act								
Project proposals received	21	22	13	8	27	43	61	73
Project proposals processed	17	18	13	8	31	22	61	48
Project proposals refused	0	0	0	0	1	3	1	3
Minor alterations requests received	14	16	6	2	25	31	45	49
Minor alterations requests processed	12	16	6	2	25	24	43	42
Revision requests to *Licences* approved	4	0	10	3	7	10	21	13
Pre-Licensing activities processed	34	36	0	0	13	32	47	68
Highways pre-planning reviews	14	16					14	16
Infrastructure project reviews-Can/Man	23	110			0	13	23	123
Hydro Low Voltage reviews	5	4					5	4
Other Reviews. Licence not required	36	34	0	0	12	15	48	49
Site inspections, monitoring and enforcement	105	96	97	119	91	97	293	312
Pesticide Use Permits Issued			236	225			236	225
Post Seasonal Reports received/compiled			221	217			221	217
Public complaints investigated	16	17	17	16	10	19	43	52
Public meetings attended	36	27	5	3	18	10	59	40
Public Hearings attended	1	1	0	0	1	1	2	2
The Dangerous Goods Handling and Transportation Act								
Project proposals received					4	7	4	7
Project proposals processed					4	7	4	7
Minor alterations requests received					8	3	8	3
Minor alterations requests processed					8	3	8	3
Pre-Licensing activities					3	5	3	5
Site inspections, monitoring and enforcement					8	10	8	10
Public meetings attended					0	0	0	0
The Public Health Act								
Fumigation Permits issued			3	5			3	5

Significant Activities

- *Water and Wastewater Facility Operators Regulation* was passed into law. The Branch has worked with Red River College and other stakeholders to develop training materials and courses for operators of water and wastewater facilities.
- Hydro Projects: An ***Environment Act*** licence was issued to Manitoba Hydro for the Selkirk Generating Station to phase out the use of coal in favour of using natural gas to reduce air pollution. Considerable effort has been put into the administering licences for the new Continuous Emission Monitoring systems for the Brandon Generating Station and the Selkirk Generating Station.
- A major environmental review of the Midwest Food Products potato processing facility has been undertaken in response to groundwater concerns.
- An ***Environment Act*** licence was issued to the R.M. of Hanover for the expansion of its wastewater treatment facility at Blumenort to accommodate the expansion of Granny's Poultry Co-operation (Manitoba) Ltd. poultry processing plant.
- The Branch made submissions at the public hearings held by the Clean Environment Commission on the City of Winnipeg's sewage treatment plants.
- A joint investigation with the Red River Region was conducted and a report prepared on the sewage spill from Winnipeg's North End Sewage Treatment Plant.
- Winter road relocations: Co-ordinated the environmental assessment and licencing of winter road relocations in accordance with the *Canada-Manitoba Agreement on Environmental Assessment Co-operation*. Manitoba Transportation and Government Services filed two proposals to relocate winter roads connecting the communities of Garden Hill on Island Lake and Red Sucker Lake and portions of the winter road connecting Cross Lake, Oxford House, Gods Lake and Gods River. The relocations improve safety and reliability of the existing winter road system by avoiding unsafe ice based sections of previous routes.
- Hydro Projects: Manitoba Hydro filed proposals for Wuskwatim generating station and associated transmission lines. Draft EIS Guidelines were prepared and finalized after government and public review and comment and CEC public review completed. Staff prepared a public document outlining all comments received respecting the Draft EIS Guidelines and action taken to revise the Guidelines where appropriate. EIS's for the two proposals were filed in April 2003. Requirements of the *Canada-Manitoba Agreement on Environmental Assessment Co-operation* will ensure thorough and comprehensive environmental assessment and review.
- Aquifer Management and in-stream flow studies: Provided technical support for development of water-quality protection plan for Oak Lake Aquifer, and continued support of *Winkler Aquifer Management Plan* implementation. Participated on technical committees to direct determination of in-stream flows, development of drainage maintenance guidelines, and aquifer management plan for Assiniboine Delta Aquifer.
- Flood Protection Works and irrigation development: Participated in and provided technical support for, several flood protection studies. Significant involvement in pre-licencing activities associated with the City of Winnipeg proposed flood protection project. Continued participation on Federal/Provincial Committees and Working Groups on planning and regulation of irrigation development.
- Manitoba Model Forest: Involvement continued, with staff on Board of Directors. Staff attended meetings of Directors, Executive Committee, and Advisory Group, and assisted planning meetings, research workshops and conferences. Liaison, funding investigation, project planning and initiation activities continued with twinned Monarch Butterfly Model Forest in Mexico and with Ngao, Ulot and Chile Model Forests in Thailand, Philippines and Chile.
- Province of Manitoba Water Strategy: Significant staff contribution to the development of the Water Strategy through participation in key role on working groups.
- Tembec Interim Three-Year Plan: Review co-ordination continued. Due to preparation of a wide-area landuse plan for east side of Lake Winnipeg, Tembec withdrew their application for a *Sustainable Forest Management Plan 2001-2010* and requested an extension of their ***Environment Act*** licence, while they develop an *Interim Three-Year Forest Management Plan*. A one-year extension to the ***Environment Act*** licence was granted for 2003 while the company works with new First Nation partners in forest management development opportunities and preparation of a plan. Staff participated on interdepartmental and intradepartmental planning committees on this proposal.

- Pesticide Use Permits: review and approval of applications for pesticide use continued. Government departments and municipalities require a Pesticide Use Permit annually.
- Crop Protection Warehouses/Fertilizer Developments: review of applications to upgrade agricultural chemical storage facilities to meet industry standards continued. All facilities are required to meet stringent requirements in order to receive chemical products.
- Pesticide Regulations: Health Canada continued with their *Action Plan for Urban Use Pesticides*, developed in partnership with provincial and territorial governments. A main objective is reducing pesticide use on lawns by applying Integrated Pest Management principles emphasising prevention, reduced-risk products, and pesticide application only when necessary. Pesticide Classification Implementation Working Group produced *A Proposal For A National Pesticide Classification System For Canada* to harmonize federal and provincial classification systems. Consultation with interested stakeholders was commenced.
- West Nile Virus: with federal, provincial and territorial ministries, Manitoba Health continued with a comprehensive, co-ordinated, and pro-active *Risk Management Plan* to respond to West Nile Virus.

Table EA.2

Suspensions or Variations under *The Environment Act* 2002-2003

Section 18(2) of ***The Environment Act*** states:

"A suspension or variation granted pursuant to subsection (1) shall be recorded in the public registry and in the department's annual report."

The following suspension requests were approved in 2002-03:

Date	Location	Purpose
May 16/02	Community of Brochet Sewage Lagoon	Emergency Discharge Environment Act Licence No. 456
June 11/02	Town of Winkler Wastewater Facility	Emergency Discharge Environment Act Licence No. 2525
June 20/02	Northern Aff., Dept of Now Aboriginal & Northern Aff. Moose Lake Sewage Lagoon	Emergency Discharge Environment Act Licence No. 1862
Sept. 05/02	Town of Winnipeg Beach Sewage Lagoon	Emergency Discharge Environment Act Licence No. 314VCO
Sept. 16/02	Community of Brochet Sewage Lagoon	Emergency Discharge Environment Act Licence No. 456
Oct. 18/02	Lord Selkirk School Division Lockport Jr. High School	Emergency Discharge Environment Act Licence No. 1150
Oct. 25/02	R.M. of Hanover Blumenort Lagoon	Emergency Discharge Environment Act Licence No. 1065
Oct. 30/02	Town of Morris Wastewater Facility	Emergency Discharge Environment Act Licence No. 2562
Nov. 04/02	R.M. of Hanover Blumenort Lagoon	Emergency Discharge Environment Act Licence No. 1065
Nov. 13/02	Northern Aff., Dept of Now Aboriginal & Northern Aff. Moose Lake Sewage Lagoon	Emergency Discharge Environment Act Licence No. 1862
Nov. 25/02	R.M. of Park Wastewater Lagoon	Emergency Discharge Environment Act Licence No. 2206
Nov. 27/02	Town of Plum Coulee Wastewater Facility	Emergency Discharge Environment Act Licence No. 2575

Table EA.3

12.5(c) Environmental Assessment and Licensing

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	873.7	15.00	965.9	(92.2)	
Other Expenditures	158.4		107.9	50.5	

Aboriginal Relations

The Branch was established to develop and maintain a positive relationship with Aboriginal people of Manitoba. It is important that this level of commitment be recognized to meet the ever-increasing requirements of the Aboriginal community, non-Aboriginal community, and Manitoba Conservation.

In setting direction for the Department, the Branch participates in strategic planning processes, such as development of policies, legislation, and programs to ensure that Aboriginal and Treaty rights are taken into consideration. The Branch is accountable for the research, analysis, development, implementation and evaluation of new and existing resource programs. The Branch is also engaged in development of integrated resource policies, legislation relating to land use, co-management, resource allocation, environmental impacts, sustainable development initiatives, and enforcement. Another essential element of its mandate is to bridge user views and requirements of Aboriginal communities. The Branch also facilitates communication between the various user interests and the Department.

The Branch continued to chair an interdepartmental committee that is developing the policy and procedure directives on consultation with Aboriginal peoples. This policy is in accordance with the ***Natural Resources Transfer Agreement*** (1931), the ***Constitution Act of Canada*** (1982), and direction provided by Court decisions that requires the Department to undertake meaningful consultations with Aboriginal people on Aboriginal and Treaty rights when an action of the Department interferes with a Treaty and/or Aboriginal right to fish, hunt and/or trap. The Aboriginal community is expected to play an integral role in developing this policy.

The Branch is also expected to play a key role in the development of a Provincial Consultation Policy for all departments. This is being done through a technical advisory committee of the Interdepartmental Planning Board (IPB).

The Branch was involved in all aspects of natural resource management, including program and policy review and development. It has also taken an integral role in dispute resolution by facilitating dialogue between the Aboriginal community and the Department. In the long term, dialogue between all users and Aboriginal involvement in decision-making will lead to improved management of natural resources.

General Activities

- Provided input from an Aboriginal perspective through review of natural resource management programs, proposed programs, and in developing resource policy and legislation.
- Met with Aboriginal community to identify concerns and issues, and develop plans of action to resolve them.
- Assisted developing action plans to resolve Aboriginal community issues.
- Provided direction for the Department and the Aboriginal community in natural resource management programs and issues.
- Participated in discussions and negotiations to develop formal agreements for managing natural resources.
- Provided educational information through varied media to the Department, Aboriginal, and non-Aboriginal communities.
- Attended meetings and gatherings in Aboriginal and non-Aboriginal communities, and with users of natural resources.
- Responded to inquiries from the Department, resource users, public, and educational institutions.

Specific Activities

- Continued to facilitate meetings and dialogue between licensed and First Nation fishers.
- Continued developing the draft *Policy and Procedure Directives on Consultation with Aboriginal People*.
- Continued to participate in the development of co-management agreements with the Opaskwayak Cree Nation, Manitoba Metis Federation and the West Region Tribal Council.
- Implemented a Hunter and Firearm Safety Instructor Training Program.
- Completed development of a Webpage, *Fishing, Hunting and Trapping; The Rights and Responsibilities of First Nations People*.

- Completed development of inserts into *2003 Anglers' Guide*, *Hunting Guide* and *Trapper's Guide* on rights and responsibilities of First Nations people to fish, hunt and trap.
- Reviewed and commented on Crown land sale policy and developed draft Land Use Codes that identify First Nations interests to a parcel of Crown land.
- Participated in Treaty Land Entitlement process.
- Developed, in consultation with Elders, a draft of a policy for the Disposition of Birds of Prey and other Wildlife for Traditional Use by First Nation's People of Manitoba.

The Branch is staffed by a Director, two policy and program analysts, a Wildlife Manager (secondment from Wildlife and Ecosystem Protection Branch), and a Heritage Resource Extension Officer.

Aboriginal Resource Council

The Council, the first of its kind in Canada, acts as an advisory body to the Minister by providing Aboriginal input and advice on the development of policies, environmental protection, and conservation of natural resources. The Branch provides secretariat support to the Council. The Council provides First Nations and Métis perspectives and advice on:

- Program and policy development and processes,
- Issues including co-management, forestry, mining, fishing, and non-timber forest products,
- Resource management information,
- Development and capacity-building of First Nation and Métis communities, and
- Review and evaluation of Department policies, legislation, and programs.

Table AR.1

12.5(d) Aboriginal Relations

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Salaries and Employee Benefits	186.0	3.00	181.8	4.2	
Other Expenditures	47.4		46.0	1.4	

Clean Environment Commission

Under ***The Environment Act***, The Clean Environment Commission (CEC) provides a mechanism through which the public can participate in environmental decision making. The Commission conducts public reviews and hearings into matters of environmental concern and provides advice and recommendations to the Minister. The Commission, while reporting directly to the Minister, is independent of the Department.

The Commission issues its own Annual Report with information on its mandate and operations. Copies can be obtained from the CEC at 305 – 155 Carlton Street, Winnipeg, MB R3C 3H8. The CEC can be contacted at 204-956-7091 or toll free at 1-800-597-3556 or by fax at 204-945-0090. The CEC's web site is www.cecmanitoba.ca.

Table CE.1
12.6 Clean Environment Commission

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
Total Salaries and Employee Benefits	270.0	3.00	262.4	7.6	
Other Expenditures	265.2		274.9	(9.7)	

International Institute for Sustainable Development

The Institute promotes the concept of environmentally sustainable economic development and the integration of the principles and practices of sustainable development within and between the public, private and voluntary sectors on a national and international basis.

The Institute issues a separate Annual Report. Copies can be obtained from the Institute at 161 Portage Avenue East, 6th Floor, Winnipeg, MB R3B 0Y4. The Institute can be contacted at 204-958-7700.

Table II.1

12.7 International Institute for Sustainable Development

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Other Expenditures	1,034.9		1,145.9	(111.0)	

Infrastructure and Minor Capital Projects

Equipment

Departmental programs were supported by purchasing equipment and paying for minor infrastructure. Funding was allocated for computer hardware, office renovations, and groundwater investigation equipment.

Table IM.1
12.8(a) Equipment

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Other Expenditures	350.0		460.6	(110.6)	

Water Projects

Projects (most being multi-year) included Assiniboine River dyke refurbishment, construction of Netley Creek, right-of-way acquisition for South-Buffalo Creek project, below-waterline refurbishment Red River Floodway Inlet Control Structure's East gate, and clean-up of construction at the pumping station near The Pas. Commenced construction of works under the SWII Agreement on the Portage Diversion.

Several waterway crossings were replaced or repaired. Substantial flood-damaged infrastructure after spring flooding was restored.

Table IM.2
12.8(b) Water Projects

Expenditures by Sub-appropriation	Actual 2002/03 $	Estimate 2002/03 FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Other Expenditures	3,592.9		4,390.4	(797.5)	

Park Facilities

The program improved campgrounds, including campground expansion, electrification and redevelopment in the Whiteshell (Big Whiteshell and Falcon Lakes), campsite enlargement, electrification and leveling at Paint Lake, and campground development at Clearwater Lake (Pioneer Bay Campground). Continued leveling, sanding and upgrading of the lake at Birds Hill. Washroom buildings were upgraded throughout the system. The resurfacing of Grand Beach roads including widening of bicycle lanes was completed. Water system upgrades were done at Caddy and White Lakes and St. Ambroise Provincial Park with test wells and designs for Falcon Lake. Disability access programs (campsite and washroom modifications) continue.

Table IM.3
12-8(c) Park Facilities

Expenditures by Sub-appropriation	Actual 2002/03 $	FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Other Expenditures	3,639.6		3,814.3	(174.7)	

Amortization of Capital Assets

The Department expended the annual amortization costs of all completed assets based on the useful life of each asset. Assets purchased or constructed in 2002-03 were expended at one-half the annual amortization rate. The amortization expense also included the portion of corporate information technology projects attributable to the Department.

Table AC.1

12.9 Amortization and Other Costs related to Capital Assets

Expenditures by Sub-appropriation	Actual 2002/03	Estimate 2002/03		Variance Over/(Under)	Expl. No.
	$	FTE	$		
(a) Desktop Services					
(1) Amortization Expense – Hardware and Transition	685.7		646.1	39.6	
(2) Amortization Expense – Enterprise Software	114.7		115.7	(1.0)	
(3) Enterprise Software Licenses	265.2		265.2	0.0	
(b) Amortization Expense	1,302.8		1,421.0	(118.2)	
(c) Interest Expense	400.9		420.5	(19.6)	

Flood Proofing Programs

Funding assistance continued for flood protecting homes, businesses, farms, and communities in Red River Valley.

Water Branch administers the $100 million Canada Manitoba Partnership Agreement on Red River Valley Flood Protection. The $50 million provincial contribution was allocated among five program elements as follows:

- Home/business flood proofing ($20.3 million)
- Community dyking ($17.5 million)
- City of Winnipeg work ($5.2 million)
- Environmental impact mitigation ($2.5 million)
- Provincial flood control infrastructure ($4.5 million)

All projects funded by the Provincial Flood Control Infrastructure element were completed in fiscal 2001 - 2002. Funding for individual projects under the Home and Business element and the Environmental Impact Mitigation & Scientific Data element terminated on March 31, 2003.

As of March 31, 2003 Community Ring Dike projects for Rosenort, Gretna, St. Pierre-Jolys, Lowe Farm, Rosenfeld, and St. Lazare had been completed. It is anticipated the remaining projects, including Grande Pointe, St. Mary's Road, Ste. Agathe, Niverville, Riverside, Emerson and Dominion City, will be completed by the end of the 2003 construction season.

Funding for the City of Winnipeg Flood Proofing Program has been extended to March 31, 2005.

Construction of two openings (notches) in the south-easterly embankment of the Floodway, between St. Mary's Road and Grande Pointe, was partially completed to allow about 3% more flow (about 2,000cfs) to enter during 1997-size floods, without increasing upstream water elevation. Minor upgrading to West Dyke and restoration of 1997 flood damage was completed. Permanent extension to West Dyke along PR 305 was also completed, except for clean up. Below water-line refurbishment was completed on the Inlet Control Structure's East Gate.

Table FP.1

12.10 Flood Proofing Programs

Expenditures by Sub-appropriation	Actual 2002/03 $	FTE	Estimate 2002/03 $	Variance Over/(Under)	Expl. No.
Total Other Expenditures	20,587.7		23,149.2	(2,561.5)	

Revenue and Expenditure Summaries

Table RE.1

Reconciliation Statement

Details	2002-03 Estimates
2002-03 Main Estimates	**144,248.5**
Transfer of functions to: **Energy, Science and Technology**	**(563.7)**
Allocation of funds to: **Canada-Manitoba Enabling Vote** **- Flood Proofing Programs**	**(18,519.4)**
2002-03 ESTIMATE	**125,165.4**

Table RE.2

Revenue Summary By Source

For the year ended March 31, 2003 with comparative figures for the previous year

Actual 2001-02	Actual 2002-03	Increase (Decrease)	Source	2002-03 Actual	2002-03 Estimate	Variance	Expl. No.
			Government of Canada:				
151.0	151.0		1. Migratory Waterfowl Crop Damage Prevention Agreement	151.0	151.0	0.0	
8,571.9	7,530.0	(1,041.9)	2. 1997 Flood Proofing Program Phase II	4,116.4	4,489.1	(372.7)	
			3. 1997 Flood Proofing Program Phase III				1
8,722.9	7,681.0	(1,041.9)	**Sub-Total**	4,267.4	4,640.1	(372.7)	
			Current Operating Programs:				
297.0	223.9	(73.1)	(a) Environment Fees and Sundry	223.9	312.8	(88.9)	2
254.3	217.5	(36.8)	(b) Fisheries Fees and Sundry	217.5	228.8	(11.3)	
660.2		(660.2)	(c) 1997 Flood Proofing Program	(37.0)	1,269.0	(1,306.0)	3
6,534.9	7,579.6	1,044.7	(d) Forestry Fees and Sundry	7,579.6	6,546.8	1,032.8	4
2,105.1	2,011.7	(93.4)	(e) Land Information Sales and Fees	2,011.7	2,199.8	(188.1)	
5,830.7	5,733.8	(96.9)	(f) Licence Sales by Vendors	5,733.8	5,709.4	24.4	
9,379.4	9,793.5	414.1	(g) Parks Fees	9,793.5	9,401.4	392.1	
2,105.3	4,317.5	2,212.2	(h) Regional Operations Fees and Cost Recovery	4,317.5	1,045.0	3,272.5	5
109,299.9	96,546.7	(12,753.2)	(i) Water Power Rentals	96,546.7	98,690.0	(2,143.3)	6
139.6	214.4	74.8	(j) Water Resources Sundry	214.4	118.8	95.6	7
51.2	47.9	(3.3)	(k) Wildlife Sundry	47.9	39.0	8.9	
404.0	396.9	(7.1)	(l) Sundry	397.0	303.3	93.6	8

Table RE.2

Revenue Summary By Source

For the year ended March 31, 2003 with comparative figures for the previous year

Actual		Increase (Decrease)	Source	2002-03 Actual	2002-03 Estimate	Variance	Expl. No.
2001-02	2002-03						
137,061.6	127,083.4	(9,978.2)	Sub-Total	127,046.5	125,864.1	1,182.4	
145,784.5	**134,764.4**	**(11,020.1)**	**Total Revenue**	**131,313.9**	**130,504.2**	**809.7**	
23.1	23.3	0.2	Sale of Government Assets	23.3	50.0	(26.7)	

Explanation Number:

1. 1997 Flood Proofing – Phase III was not carried forward.
2. Fewer proposals were filed.
3. The 2002/03 actual for 1997 Flood Proofing Phase II – Municipal Floodproofing was ($37.0) due to reduction in municipal contributions re: in kind allowances for the Community Ring Dikes Programs.
4. The 2002/03 actual for Forestry Fees was higher due to a favourable building products market which resulte in increased production.
5. Recoveries for fire suppression activities were higher than 2001/02 due to a suppression on Indian Reserves CN, CP and HBC Railway lines as well as suppression assistance provided to other provinces under th MARS (Mutual Aid Resource Sharing) Agreement.
6. The 2002/03 actual for Water Power Rentals was lower than estimated because water supply condition were below normal. Present year consumption was reduced both domestically and extra-provincially due t mild weather conditions across the mid-west.
7. The 2002/03 actual for Water Resources - Sundry was higher than estimated due to increased utilization o Manitoba Hydro's Selkirk Thermal Generating Station.
8. The 2002/03 actual for Sundry was higher than estimated due to a salary recovery from Indian and Norther Affairs and an increase in employee board and lodging.

Table RE.3

Expenditure Summary

For fiscal year ended March 31, 2003 with comparative figures for the previous year

Estimate 2002/03	Appropriation	Actual 2002/03	Actual 2001/02	Increase (Decrease)	Exp No.
	12-1 Administration and Finance				
28.4	(a) Minister's Salary	28.3	28.0	0.3	
	(b) Executive Support				
458.6	Salaries and Employee Benefits	455.3	444.6	10.7	
108.8	Other Expenditures	107.0	123.5	(16.5)	
	(c) Corporate Services				
660.6	Salaries and Employee Benefits	681.9	637.1	44.8	
680.9	Other Expenditures	640.1	742.6	(102.5)	
	(d) Financial Services				
1,423.5	Salaries and Employee Benefits	1,482.5	1,388.9	93.6	
312.0	Other Expenditures	278.2	339.1	(60.9)	
	(e) Human Resource Services				
997.8	Salaries and Employee Benefits	980.4	958.5	21.9	
84.8	Other Expenditures	74.8	100.7	(25.9)	1
	(f) Information Technology Services				
1,262.5	Salaries and Employee Benefits	1,270.9	1,182.2	88.7	
335.4	Other Expenditures	341.8	366.2	(24.4)	
6,535.3	Total 12-1	6,341.2	6,311.4	29.8	

Estimate 2002/03	Appropriation	Actual 2002/03	Actual 2001/02	Increase (Decrease)	Expl. No.
	12-2 Conservation Support Services				
	(a) Computer Graphics				
480.9	Salaries and Employee Benefits	485.0	518.6	(33.6)	
38.1	Other Expenditures	36.8	41.4	(4.6)	
	(b) Survey Services				
1,660.5	Salaries and Employee Benefits	1,372.8	1,292.2	80.6	
457.6	Other Expenditures	450.0	352.9	97.1	2
(1,570.7)	Less: Recoveries from other appropriations	(1,540.2)	(1,384.4)	(155.8)	
	(c) Distribution Centre				
390.7	Salaries and Employee Benefits	417.7	320.5	97.2	3
313.4	Other Expenditures	313.3	342.8	(29.5)	
(50.0)	Less: Recoverable from other appropriations	(64.2)	(67.9)	3.7	
1,720.5	Total 12-2	1,471.2	1,416.1	55.1	
	12-3 Regional Operations				
	(a) Headquarters Operations				
2,568.6	Salaries and Employee Benefits	2,596.7	2,655.2	(58.5)	
1,625.6	Other Expenditures	2,848.6	1,806.7	1,041.9	4
240.6	Problem Wildlife Control	204.2	209.7	(5.5)	
	(b) Northwest Region				
2,282.1	Salaries and Employee Benefits	2,201.4	2,099.1	102.3	
776.4	Other Expenditures	765.8	785.8	(20.0)	
	(c) Northeast Region				
2,530.5	Salaries and Employee Benefits	2,264.3	2,193.1	71.2	
969.3	Other Expenditures	960.0	971.9	(11.9)	
	(d) Interlake Region				
3,370.8	Salaries and Employee Benefits	3,367.8	3,377.9	(10.1)	
1,392.1	Other Expenditures	1,289.2	1,368.6	(79.4)	
	(e) Eastern Region				
3,425.1	Salaries and Employee Benefits	3,327.3	3,420.4	(93.1)	
938.2	Other Expenditures	926.4	924.2	2.2	
	(f) Western Region				
5,339.1	Salaries and Employee Benefits	5,155.5	5,296.0	(140.5)	
1,763.9	Other Expenditures	1,759.1	1,786.2	(27.1)	
	(g) Red River Region				
4,821.1	Salaries and Employee Benefits	4,453.9	4,264.5	189.4	
1,300.0	Other Expenditures	1,278.4	1,230.2	48.2	
	(h) Fire Program				
4,617.5	Salaries and Employee Benefits	4,760.8	4,683.1	77.7	
7,814.9	Other Expenditures	7,582.1	7,372.1	210.0	
	(j) Office of Drinking Water				
812.7	Salaries and Employee Benefits	364.3	294.0	70.3	5
1,009.4	Other Expenditures	812.0	250.5	561.5	6
47,597.9	Total 12-3	46,917.8	44,989.2	1,928.6	
	12-4 Conservation Programs				
	(a) Divisional Administration				
134.4	Salaries and Employee Benefits	145.4	195.7	(50.3)	7
90.5	Other Expenditures	151.9	278.9	(127.0)	8
224.9	Total 12-4A	297.3	474.6	(177.3)	

Estimate 2002/03	Appropriation	Actual 2002/03	Actual 2001/02	Increase (Decrease)	Expl No.
	(b) Water Management				
	(1) Administration				
310.5	Salaries and Employee Benefits	335.2	346.9	(11.7)	
1,929.8	Other Expenditures	1,934.7	1,600.1	334.6	
25.0	Grant Assistance	16.0	0.0	16.0	
	(2) Water Licensing				
719.8	Salaries and Employee Benefits	910.8	877.0	33.8	
37.1	Other Expenditures	36.6	45.2	(8.6)	
	(3) Water Planning and Development				
1,102.5	Salaries and Employee Benefits	1,004.2	1,068.4	(64.2)	
71.1	Other Expenditures	71.1	114.9	(43.8)	9
	(4) Surface Water Management				
840.4	Salaries and Employee Benefits	783.3	731.6	51.7	
244.7	Other Expenditures	229.8	241.0	(11.2)	
587.0	Canada-Manitoba Agreement for Water Quantity Surveys	587.0	548.4	38.6	
	(5) Groundwater Management				
972.4	Salaries and Employee Benefits	841.9	825.2	16.7	
352.8	Other Expenditures	351.0	473.8	(122.8)	10
	(6) Water Quality Management				
428.6	Salaries and Employee Benefits	425.9	428.8	(2.9)	
219.8	Other Expenditures	196.2	135.8	60.4	11
4,000.0	(7) Waterway Maintenance	3,837.9	4,902.6	(1,064.7)	12
11,841.5	Total 12-4B	11,561.6	12,339.7	(778.1)	
	(c) Parks and Natural Areas				
	(1) Administration				
355.4	Salaries and Employee Benefits	430.3	393.3	37.0	
305.8	Other Expenditures	343.8	337.5	6.3	
191.2	Grant Assistance	191.2	191.2	0.0	
	(2) Planning and Development				
916.2	Salaries and Employee Benefits	892.6	819.5	73.1	
163.6	Other Expenditures	152.2	187.9	(35.7)	
	(3) Park Districts				
373.1	Salaries and Employee Benefits	376.3	381.3	(5.0)	
48.8	Other Expenditures	46.8	49.3	(2.5)	
	(4) Park Operations and Maintenance				
10,824.4	Salaries and Employee Benefits	10,778.4	10,446.1	332.3	13
4,397.4	Other Expenditures	4,315.7	4,233.5	82.2	
	(5) Support Services				
291.8	Salaries and Employee Benefits	263.5	326.1	(62.6)	
245.1	Other Expenditures	241.5	283.8	(42.3)	
18,112.8	Total 12-4C	18,032.3	17,649.5	382.8	
	(d) Climate Change				
237.1	Salaries and Employee Benefits	271.4	322.9	(51.5)	
71.5	Other Expenditures	91.2	82.7	8.5	
2.8	Grant Assistance	2.2	4.2	(2.0)	14
311.4	Total 12-4D	364.8	409.8	(45.0)	

Estimate 2002/03	Appropriation	Actual 2002/03	Actual 2001/02	Increase (Decrease)	Expl. No.
	(e) Forestry				
	(1) Administration				
359.1	Salaries and Employee Benefits	354.0	319.3	34.7	
370.8	Other Expenditures	368.7	482.3	(113.6)	15
153.4	Grant Assistance	153.4	153.4	0.0	
	(2) Forest Inventory and Resource Analysis				
835.7	Salaries and Employee Benefits	832.2	814.8	17.4	
824.8	Other Expenditures	707.2	723.6	(16.4)	
	(3) Forest Health and Renewal				
1,753.6	Salaries and Employee Benefits	2,426.9	1,985.3	441.6	16
3,663.3	Other Expenditures	2,858.7	1,987.4	871.3	17
(1,292.0)	Less: Recoverable from Urban and Rural Economic Development Initiatives	(1,308.7)	0.0	(1,308.7)	
	(4) Forest Management and Development				
506.8	Salaries and Employee Benefits	507.5	480.1	27.4	
37.0	Other Expenditures	33.8	65.7	(31.9)	18
1,411.9	(5) Forest Regeneration Stock	1,580.3	1,584.6	(4.3)	
8,624.4	Total 12-4E	8,514.0	8,596.5	(82.5)	
	(f) Fisheries				
	(1) Administration				
126.2	Salaries and Employee Benefits	128.6	125.1	3.5	
153.9	Other Expenditures	200.3	189.2	11.1	
	(2) Fish Culture				
661.3	Salaries and Employee Benefits	646.6	629.8	16.8	
227.4	Other Expenditures	193.1	259.3	(66.2)	19
	(3) Fisheries Habitat Management				
448.1	Salaries and Employee Benefits	451.8	395.5	56.3	
51.5	Other Expenditures	51.5	105.6	(54.1)	20
	(4) Sport and Commercial Fishing Management				
630.7	Salaries and Employee Benefits	619.9	630.7	(10.8)	
59.2	Other Expenditures	58.2	66.4	(8.2)	
410.0	(5) Northern Fishermen's Freight Assistance	410.0	410.0	0.0	
350.0	(6) Fisheries Enhancement Initiative	349.6	349.0	0.6	
3,118.3	Total 12-4F	3,109.6	3,160.6	(51.0)	
	(g) Wildlife and Ecosystem Protection				
	(1) Administration				
464.3	Salaries and Employee Benefits	480.0	461.0	19.0	
370.4	Other Expenditures	367.8	453.4	(85.6)	21
207.0	Grant Assistance	207.0	207.0	0.0	
	(2) Game and Fur Management				
621.8	Salaries and Employee Benefits	658.6	626.8	31.8	
388.9	Other Expenditures	332.4	365.8	(33.4)	
89.9	Grant Assistance	89.9	89.9	0.0	
	(3) Habitat Management and Ecosystem Monitoring				
907.5	Salaries and Employee Benefits	759.2	819.6	(60.4)	
113.3	Other Expenditures	104.2	94.1	10.1	
645.0	Grant Assistance	465.0	645.0	(180.0)	22

Estimate 2002/03	Appropriation	Actual 2002/03	Actual 2001/02	Increase (Decrease)	Expl. No.
	(4) Biodiversity Conservation				
347.1	Salaries and Employee Benefits	306.5	284.6	21.9	
80.3	Other Expenditures	66.7	83.4	(16.7)	
350.4	(5) Canada-Manitoba Waterfowl Damage Prevention Agreement	342.0	301.4	40.6	
225.0	(6) Wildlife Habitat Enhancement Initiative	274.3	217.2	57.1	23
4,810.9	Total 12-4G	4,453.6	4,649.2	(195.6)	
432.1	(h) Special Conservation and Endangered Species Fund	315.3	283.2	32.1	
432.1	Total 12-4H	315.3	283.2	32.1	
	(j) Pollution Prevention				
614.5	Salaries and Employee Benefits	568.1	552.5	15.6	
76.8	Other Expenditures	71.9	77.5	(5.6)	
691.3	Total 12-4J	640.0	630.0	10.0	
	(k) Lands				
	(1) Crown Lands Operations				
814.3	Salaries and Employee Benefits	726.5	770.1	(43.6)	
1,306.3	Other Expenditures	1,321.3	1,473.1	(151.8)	24
	(2) Crown Lands Registry				
237.9	Salaries and Employee Benefits	182.7	163.2	19.5	
161.3	Other Expenditures	154.2	176.2	(22.0)	
	(3) Remote Sensing				
551.3	Salaries and Employee Benefits	566.0	661.5	(95.5)	25
239.0	Other Expenditures	240.0	249.2	(9.2)	
(23.7)	Less: Recoverable from other appropriations	(1.5)	(17.5)	16.0	26
	(4) Land Mapping Services				
459.9	Salaries and Employee Benefits	471.1	461.0	10.1	
73.1	Other Expenditures	72.7	72.1	0.6	
3,819.4	Total 12-4K	3,733.0	4,008.9	(275.9)	
50.0	(m) Habitat Enhancement Fund	50.0	50.0	0.0	
52,037.0	Total 12-4	51,071.5	52,252.0	(1,180.5)	
	12-5 Environmental Stewardship				
	(a) Divisional Administration				
143.7	Salaries and Employee Benefits	147.7	142.7	5.0	
165.1	Other Expenditures	75.1	156.3	(81.2)	27
400.0	Northern Initiatives	25.0	0.0	25.0	
110.9	Grant Assistance	110.9	91.4	19.5	
	(b) Sustainable Resource Management				
1,096.4	Salaries and Employee Benefits	998.4	927.8	70.6	
1,011.8	Other Expenditures	976.4	1,186.5	(210.1)	28
10.2	Grants Assistance	20.2	0.0	20.2	
	(c) Environmental Assessment and Licensing				
965.9	Salaries and Employee Benefits	873.7	880.3	(6.6)	
107.9	Other Expenditures	158.4	116.1	42.3	29

Estimate 2002/03	Appropriation	Actual 2002/03	Actual 2001/02	Increase (Decrease)	Expl. No.
	(d) Aboriginal Relations				
181.8	Salaries and Employee Benefits	186.0	110.8	75.2	30
46.0	Other Expenditures	47.4	29.2	18.2	31
4,239.7	Total 12-5	3,619.2	3,641.1	(21.9)	
	12-6 Clean Environment Commission				
262.4	Salaries and Employee Benefits	270.0	297.9	(27.9)	
274.9	Other Expenditures	265.2	289.3	(24.1)	
537.3	Total 12-6	535.2	587.2	(52.0)	
1,145.9	**12-7 International Institute for Sustainable Development**	1,034.9	1,060.0	(25.1)	
1,145.9	Total 12-7	1,034.9	1,060.0	(25.1)	
	12-8 Infrastructure and Minor Capital Projects				
460.6	(a) Equipment	350.0	269.2	80.8	32
4,390.4	(b) Water Projects	3,592.9	4,949.6	(1,356.7)	33
3,814.3	(c) Park Facilities	3,639.6	3,761.7	(122.1)	
8,665.3	Total 12-8	7,582.5	8,980.5	(1,398.0)	
	12-9 Amortization and Other Costs Related to Capital Assets				
	(a) Desktop Services				
646.1	(1) Amortization Expense – Hardware and Transition	685.7	665.2	20.5	
115.7	(2) Amortization Expense – Enterprise Software	114.7	114.7	0.0	
265.2	(3) Enterprise Software Licenses	265.2	0.0	265.2	
1,421.0	(b) Amortization Expense	1,302.8	1,735.7	(432.9)	
420.5	(c) Interest Expense	400.9	434.0	(33.1)	
2,868.5	Total 12-9	2,769.3	2,949.6	(180.3)	
23,149.2	**12-10 Flood Proofing Programs**	20,587.7	22,342.9	(1,755.2)	34
23,149.2	Total 12-10	20,587.7	22,342.9	(1,755.2)	
148,314.6	**TOTAL EXPENDITURES**	**141,930.5**	**144,530.0**	**(2,599.5)**	
700.0	**B.2 Capital Investment – Conservation**	635.9	870.4	(234.5)	35

Explanations

1. Decrease in Human Resources other expenditures is due to general expenditure management measures reduction related to travel, communications and other operating expenditures in 2002/03.
2. Increase in Survey Services other expenditures is attributable to Grand Rapids Forebay survey costs.
3. Increase in Distribution Centre salaries is due to filling of staff vacancy in 2002/03.

4. Future expenditure provision in the amount of $1,137.4 has been made to fund potential future costs related to various environmental issues (asbestos removal, landfill site closure, PCB materials removal, aquifer contamination, etc.) at the former Manfor Site, The Pas. This provision "tops up" the funding required to meet all estimated remaining environmental remediation costs. The Province, as part of the sale of this facility to then Repap Manitoba (now Tolko), assumed financial responsibility for all costs related to the remediation of the indicated environmental issues at that site. Total estimated costs are expected to be in excess of $12.0 million (of which approximately $9.0 million has already been expended.)
5. Increase in the Office of the Drinking Water salaries and related benefits in 2002/03 is due to the filling of the Drinking Water Program positions. This program was implemented in 2001/02.
6. Increase in the Office of the Drinking Water other operating expenditures is due to expansion of the Drinking Water Program in 2002/03. 2001/02 was the first year for the program and the operating costs were minimal in 2001/02.
7. Decrease in Conservation Programs Divisional Administration salaries and related benefits is due to non-recurring severance payments for retirement of employees incurred in 2001/02.
8. Decrease in Conservation Programs Divisional Administration other operating expenditures is due to General expenditure management measures reduction related to travel, communications and other operating expenditures in 2002/03.
9. Decrease in Water Planning and Development other operating expenditures is due to a reduction in travel-related expenditures for the Red River Basin Board Water Management Strategy program and delays in implementation of the Carberry Aquifer/Assiniboine Aquifer program.
10. Decrease in Groundwater Management other operating expenditures is due to the realignment of lab fee expenditures to Water Management – Administration other expenditures.
11. Increase in Water Quality Management other operating expenditures is due to increase in expenditures related to The Assiniboine River Study in 2002/03.
12. Decrease in Waterway Maintenance operations is due to the 2001 spring flood restoration labour costs, expended against the appropriation in 2001/02.
13. Increase in Parks Operations and Maintenance salaries is related to the seasonal employment of Parks employees at an adjusted pay scale in 2001/02.
14. Decrease in Climate Change, Grants Assistance is due to the transfer Climate Change program to the Department of Energy, Science, and Technology in 2002/03.
15. Decrease in Forestry Administration other operating expenditures is due to general expenditure management measures reduction of departmental operating costs, including components such as in and out of Province travel, and office operating costs.
16. Increase in Forest Health and Ecology salaries and related benefits represents salaries paid for the Redi Program which offsets the recoveries within the appropriation. The recoveries for the Redi Program were transferred to the departmental appropriation in 2002/03. In 2001/02 these expenditures were recovered from Emergency Expenditures.
17. Increase in Forest Health and Ecology other operating represents operating expenditures paid for the Redi Program which offsets the recoveries within the. The recoveries for the Redi Program were transferred to the department in 2002/03. In 2001/02 these expenditures were recovered from Emergency Expenditures.
18. Decrease in Forest Management and Development other operating expenditures is due to general management measures reduction of departmental operating costs, including components such as in and out of Province travel, program and office operating costs.
19. Decrease in Fish Culture other operating expenditures is due to general expenditure management measures reduction of departmental costs, including travel and communication related to the spring and fall spawn camp operations in 2002/03.
20. Decrease in Fisheries Habitat Management other operating expenditures is due to the inactivity in the development of GIS (Geographic Information System) mapping in the Fisheries Database Projects.
21. Decrease in Wildlife and Ecosystem Protection Administration, other operating expenditures due to general expenditure management measures reduction of departmental costs related to travel and communications.
22. Decrease in Habitat Management and Ecosystem Monitoring, Grants Assistance programs due to lapsing of MHHC core grant funding as part of the general expenditure management measures reduction.
23. Increase in Wildlife Habitat Enhancement Initiatives expenditures is due to the payment of Chronic Wasting Disease program related expenditures in 2002/03.

24. Decrease in Crown Lands Operations other expenditures is due to reduced payment of grants in lieu of taxes, which were paid for by other departmental appropriations, and a decrease in appraisal services in 2002/03.
25. Decrease in Lands – Remote Sensing salaries and employee benefits is due to a number of positions not being filled in 2002/03.
26. Increase in Lands – Remote Sensing recoveries is due to a delay in recovery of costs for remote sensing products and services from clients.
27. Decrease in Environmental Stewardship, Divisional Administration other operating is due to general expenditure management measures reduction of departmental costs related to travel and communications.
28. Decrease in Sustainable Resource Management other operating is due to reduced travel, communications and reduced professional services expenditures.
29. Increase in Environmental Assessment and Licensing other operating is due to increase expenditures related to professional services.
30. Increase in Aboriginal Relations salaries is due to the filling of vacant positions. This is a new Branch which was established in October 2001, which results in comparison of six months salaries expenditures to a full year of operations in 2002/03.
31. Increase in Aboriginal Relations other operating is due to the filling of vacant positions. This is a new Branch which was established in October 2001, which results in comparison of six months expenditures to a full year of operations in 2002/03.
32. Increase in Minor Capital, Equipment due to increased purchases.
33. Decrease in Minor Capital, Water projects expenditures in 2002/03 is due to a delay in approval for the Shellmouth Dam project.
34. Decrease in Flood Proofing Programs – Infrastructure is due to a delay in construction work on the Community Ring Dike projects because of an early freeze-up in October, 2002. Some of these projects were postponed to 2003/04. Environmental Impacts - the Pre-commitment study funded by the program element was substantially completed in 2001/02. Provincial Infrastructure program – all programs funded in were completed in 2001/02.
35. Decrease in Capital Investments expenditures is due to a reduction in approved capital investment expenditures for the department, for the fiscal year 2002/03.

Table RE.4

Five Year Expenditure and Staffing Summary by Appropriation

For year ending March 31, 1999 – March 31, 2003

		1998/99		1999/2000		2000/2001		2001/2002		2002/2003	
	Main Appropriation	**FTEs**	**$(000's)**	**FTEs**	**$(000's)**	**FTEs**	**$(000's)**	**FTEs**	**$(000's)**	**FTEs**	**$(000's)**
12-1	Administration and Finance	107.83	6,139.1	108.83	6,729.4	99.83	6,036.3	93.83	6,311.4	95.33	6,341.2
12-2	Conservation Support Services	53.00	1,500.6	53.00	1,616.6	57.00	1,344.8	52.00	1,416.1	51.00	1,471.2
12-3	Regional Operations	499.35	37,350.6	504.45	40,228.4	500.35	43,198.9	543.35	44,989.2	562.35	46,430.3
12-4	Conservation Programs	610.34	50,205.1	615.82	52,636.7	608.29	52,330.5	550.34	52,252.0	539.84	51,071.5
12-5	Environmental Stewardship	46.00	2,954.1	41.50	3,105.4	39.50	3,086.4	41.00	3,641.1	38.00	3,619.2
12-6	Clean Environment Commission	3.00	285.0	3.00	285.0	3.00	472.3	3.00	587.2	3.00	535.2
12-7	International Institute for Sustainable Development		1,145.8		1,145.8		1,145.8		1,060.0		1,034.9
12-8	Infrastructure and Minor Capital Projects		8,684.4		7,860.4		8,767.5		8,980.5		7,582.5
12-9	Amortization and Other Costs Related to Capital Assets		648.7		2,234.1		2,467.8		2,949.6		2,769.3
	Sub-total Operating Appropriations	1,319.52	108,913.4	1,326.60	115,841.8	1,307.97	118,850.3	1,283.52	122,187.1	1,289.52	120,855.3
12-10	Flood Proofing Programs		37,629.4		23,478.5		28,343.2	9.00	22,342.9	6.50	20,587.70
	Court Judgement		123.5		-		-		-		-
	Total Appropriations	**1,319.52**	**146,666.3**	**1,326.60**	**139,320.3**	**1,307.97**	**147,193.5**	**1,292.52**	**144,530.0**	**1,296.02**	**141,443.0**

*Adjusted figures reflect historical date on a comparable basis in those appropriations affected by re-organization.

Publications

Air Quality

Krawchuk, B.P. **Manitoba Ambient Air Quality: Annual Reports for 1997, 1998 and 1999**. Manitoba Conservation Report 2002-03.

Fisheries

Manitoba 2003 Angling Guide
A Profile of Manitoba's Commercial Fishery

Forestry

R. A. Bohning, J. L. Bell, W. G. A. Middlebro. **Directory of Secondary Wood Using Industries in Manitoba**. Natural Resources Canada, Canadian Forest Service, 2002.
Forest Practice Guidelines: Developing Standards for Sustainable Forest Management in Manitoba
Manitoba's Forests (produced in partnership with Natural Resources Canada, Canadian Forest Service).
Delaney, J., ed. **Manitoba Conservation Forest Practices Guidebook: Pre-Harvest Surveys.**
Delaney, J., ed. **Manitoba Conservation Forest Practices Guidebook: Protection of Softwood Understory in Mixed Wood and Hardwood Forests.**

Geographic Names

Holm, G., Buchner, A., eds. **A Place of Honour: Manitoba's War Dead Commemorated in Its Geography**. (also available in French)

Parks and Natural Areas

Ancient Beach Interpretive Trail Guide
The Camper's Guide (English And French Version)
The Cottagers' Handbook for Manitoba Provincial Parks – Third Edition (Revised)
Canadian Heritage River System: prescreening document for the Red River, Manitoba (produced in partnership with Manitoba Culture, Heritage and Tourism and Rivers West-Red River Corridor Association Inc.)
Criddle/Vane Homestead Park Reserve: Proposed Provincial Park
Duck Mountain Provincial Park Management Planning Program: Report On Public Comments
Falcon Creek Self-Guiding Trail (interpretive trail and activity guide)
Fall Camping In Manitoba
Family Vacation Cabins (bilingual)
Fire Of '83 Interpretive Trail Guide
Forester's Footsteps Interpretive Trail Guide
Grand Beach Interpretive Park Map
Grand Beach Provincial Park: Management Plan

Grass River Interpretive Park Map
Group Use Areas
Manigotagan River Park Reserve Consultation, brochure
Manitoba 2003 provincial parks guide
Manitoba's Protected Areas Initiative – Agro Manitoba
Mcgillivray Falls Interpretive Trail Guide
Parks Reservation Service
Park Visitor Statistics, 1991 to 2001
Pine Point Interpretive Trail Guide
Rivers Provincial Park: Proposed Boundary Adjustment
South Atikaki Park Reserve Consultation, brochure
Spruce Woods Interpretive Park Map
Towards A Management Plan for the Hayes River: Report On Public Comments
The Volunteer Campground Host Program
Whiteshell Interpretive Park Map
Whiteshell River Interpretive Trail Guide

Pollution Prevention

Epp, B. **Provincial survey of municipal solid waste composting and ozone depleting substance management trends**. Manitoba Conservation Report 2002-07

Sustainable Resource Management

East Side Lake Winnipeg Broad Area Planning Initiative - Phase 1 - Preliminary Discussions - Final Report "Comments And Recommendations - 2002"
East Side Lake Winnipeg Broad Area Planning Initiative - Phase 1 - Preliminary Discussions - Final Report "Executive Summary - 2002"
East Side Lake Winnipeg Round Table Terms-Of-Reference
Manitoba Round Table For Sustainable Development Annual Report 2001-2002

Water

Armstrong, N. **Assiniboine River Water Quality Study – Nitrogen and Phosphorus Dynamics, May 2001- May 2002.** Manitoba Conservation Report 2002-10
Manitoba Water Quality Standards, Objectives and Guidelines: Final draft – for additional review and comment. Manitoba Conservation Report 2002-11
Hughes, C. E. **An Overview of Water Quality in Lake Manitoba, Manitoba, Canada**. Volume 1. Manitoba Conservation Report 2002-05
Jones, G. **Phytoplankton and Microcystin-LR in the Assiniboine River at Portage la Prairie Manitoba, 1997-2001**. Manitoba Conservation Report 2002-06
Armstrong, N. **Preliminary Results from Water Quality Sampling from Red River in Response to the North Winnipeg Pollution Control Sewage Release.** Manitoba Conservation Report 2002-09
Green, D.J. and W.N. Turner. **South Tobacco Creek Manured Watershed Runoff Study, 1998-2001**. Manitoba Conservation Report 2002-02
Supply, Quality, And Use of Water in the Prairie Provinces, Manitoba edition (produced in partnership with the Government of Canada, Ducks Unlimited, Manitoba Hydro, and others).
Bourne, A., N. Armstrong and G. Jones. **Total Nitrogen and Total Phosphorus Loadings from Point and Nonpoint Sources To Manitoba Streams.** Manitoba Conservation Report 2002-04
Hughes, C. **Water Quality Assessment, Lake Athapapuskow, Manitoba, Canada**. Manitoba Conservation Report 2002-03

Wildlife and Ecosystem Protection

Common Native Pasture Plants of Southern Manitoba: A Landowner's Guide (produced in partnership with Environment Canada, Ducks Unlimited Canada, Manitoba Agriculture and Food, and others).

Geese in Winnipeg: A Homeowner's Guide for Managing Canada Geese

Manitoba 2003 Hunting Guide

Reimer, E. and C. Hamel. **Rare Species Surveys In Southwestern Manitoba Including the Spy Hill-Ellice And Ellice-Archie Community Pastures**. MS Report 03-01.

Reimer, E. and C. Hamel. **Rare Species Surveys of the Manitoba Conservation Data Centre**. MS Report 03-02.

Trapping Guide: 2002/2003

Kowalchuk, M. **Update of Mixed-Grass Prairie Inventory for Manitoba: 2002**.

Legislation

The Conservation Agreements Act, C173
The Contaminated Sites Remediation Act, C205
The Crown Lands Act, C340
[Except sections 7.2(2) to 7.6 and sections 6, 7, 10, 12(1), 14, 16, 17, 18, 21, 23 and 24 to 28 both inclusive, insofar as they relate to the administration of Crown Lands which may be designated by the Minister of Conservation as agricultural Crown Lands, and Agricultural Crown Lands Grazing and Hay Permits Regulation (Manitoba Regulation 288/88) and Agricultural Crown Land Leases Regulation (Manitoba Regulation 168/2001)]
The Dangerous Goods Handling and Transportation Act, D12
The Drinking Water Safety Act, D101
The Dutch Elm Disease Act, D107
The Dyking Authority Act, D110
The Ecological Reserves Act, E5
The Endangered Species Act, E111
The Environment Act, E125
The Fisheries Act, [except Part III] F90
The Fishermen's Assistance and Polluters' Liability Act, F100
The Forest Act, F150
The Ground Water and Water Well Act, G110
The Manitoba Habitat Heritage Act, H3
The Manitoba Hazardous Waste Management Corporation Act, H15
The International Peace Garden Act, I70
The Lake of the Woods Control Board Act, L30
The Manitoba Natural Resources Transfer Act, N30
The Natural Resources Agreement Act, 1938 N40
An Act to ratify a certain Agreement between the Government of the Dominion of Canada and the Government of the Province of Manitoba, N50
The Manitoba Natural Resources Transfer Act Amendment Act, N60
The Manitoba Natural Resources Transfer Act Amendment Act, 1963 N70
The Ozone Depleting Substances Act, O80
The Provincial Parks Act, P20
The Plants Pests and Diseases Act, P90
[That portion of clause 16(c) that pertains to arborists and clause 16(i)]
The Polar Bear Protection Act, P94
The Property Tax and Insulation Assistance Act, P143
[Part V, and section 1 and Part VI as they relate to subjects covered under Part V]
The High-Level Radioactive Waste Act, R10
The Resource Tourism Operators Act, R 119.5
The Surveys Act, [Part II] S240
The Sustainable Development Act, S270
The Tourism and Recreation Act, T100
[That portion of clauses 4(c) and (d), sections 5 and 6 and clauses 8(1)(a), (d), (f) and (g) that pertain to the licensing and operation of outfitters, hunting or fishing lodges and their out-camps]
The Waste Reduction and Prevention Act, W40
The Water Commission Act, W50
The Water Power Act, W60
The Water Resources Administration Act, W70
The Water Resources Conservation and Protection Act, W72
The Water Rights Act, W80
The Water Supply Commissions Act, W100
The Wildfires Act, W128

The Wildlife Act, W130

[Except that portion of clause 89(e) that applies to compensation for damage to crops caused by wildlife as it pertains to big game and migratory waterfowl]

The Wild Rice Act, W140

Manitoba Fishery Regulations made pursuant to section 34 of the ***Fisheries Act*** **(Canada)**

Cover: Includes 15% Post-Consumer Waste